Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: **DETERMINATION OF ROYALTY RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (*Phonorecords IV*)**	**Docket No. 21-CRB-0001-PR (2023-2027)**

WRITTEN REBUTTAL STATEMENT OF GOOGLE LLC

Volume 2 of 4

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TAB A

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WRITTEN REBUTTAL TESTIMONY OF CARLETTA HIGGINSON
(On Behalf of Google LLC)

I. INTRODUCTION

1. My name is Carletta Higginson. I am the Director and Global Head of Music Publishing for the YouTube division of Google LLC ("**Google**"). I submit this testimony in support of Google's rebuttal case.

II. COPYRIGHT OWNERS' RATE PROPOSAL IS INCONSISTENT WITH MARKET AGREEMENTS

2. I have reviewed Copyright Owners' rate proposal for this proceeding and several aspects of it are inconsistent with the arm's-length agreements that have been entered into by music publishers as willing sellers and Google as a willing buyer for the very same rights that are at issue in this proceeding—the right to make interactive transmissions and conditional downloads of sound recordings embodying musical works.

A. Copyright Owners' Proposed Rates Are Excessive and Lack Marketplace Support

3. The rates and terms proposed by Copyright Owners in this proceeding are excessive, have never been agreed to in any voluntary agreement entered into between Google

and any music publisher, would result in "double payment" to Copyright Owners, and would impose unacceptable royalty expenses on Google when combined with the other royalties required to be paid by Google to music publishers for activities that fall outside Section 115, to record labels for the use of sound recordings, and to performing rights organizations for the public performance of musical works. The Copyright Owners' own rate proposal highlights the necessity for clarifying the existing regulations so that disputes can be avoided on how the allocation of Service Provider Revenues, TCC, and subscribers should be calculated to fairly compensate musical work copyright owners and songwriters for uses under Section 115 without penalizing services that offer both Section 115 activities and non-Section 115 activities in one subscription plan.

4. In my Written Direct Testimony ("**WDT**"), I highlighted the disparity in royalties due with and without Allocation (as defined in my WDT) using various assumptions. At the time I performed those calculations, I used the pre-remand rates established by the Copyright Royalty Judges for 2021 plus royalty rates from Google's direct licenses with music publishers (see Table IV.B.2 from my WDT). I also used 2020 viewership information from subscribers to YouTube Premium ("**YTP**") and YouTube Music Premium ("**YTMP**") (see chart on page 6 of my WDT) for purposes of performing Allocations consistent with Google's hundreds of direct licenses.

5. I have updated my analysis to now incorporate the Copyright Owners' proposed rates in this proceeding:

a. Step 1 – the greater of 20% of Service Provider Revenue or 40% of TCC;

b. Step 2 – Step 1 amount minus performance royalties for Section 115 activities;

c. Step 3 – greatest of:

i. Difference following Step 2;

ii. Per Performance rate at $0.0015; and

iii. Per Subscriber Minimum ("**PSM**") rate of $1.50 per subscriber.

6. I have also updated the analysis from my WDT using the following assumptions, which are not intended to represent Google's actual royalties but are merely illustrative.

7. For my analysis, I have used the following inputs:

a. Usage information from calendar year 2021, rather than 2020, and limited the data to that from YTP rather than combining YTP and YTMP. YTP accounts for just over [redacted] of all consumption on YouTube's subscription.

b. Assumption of YTP having [redacted] subscribers paying $11.99 per month, for total subscription revenue of [redacted][1] *See* **Google Reb. Ex. 01**, WRT Table II.A.1.

c. Using the Total Allocation methodology described in my Written Direct Testimony, the Allocation percentage would be [redacted] for [redacted]. If a Music-Only Allocation methodology was utilized, the Allocation percentage for [redacted] would increase to [redacted].[2] *See* **Google Reb. Ex. 01**, WRT Table II.A.2.

[1] *See* Higginson WDT ¶ 38.
[2] *See* Higginson WDT ¶ 41, Table IV.C.2.

d. As YouTube's royalty payments to record labels currently bind on the [redacted] in its label licenses, I have assumed [redacted] based upon [redacted] even though in my illustrative calculations the percentage of revenue royalties would exceed the PSM royalties. *See* **Google Reb. Ex. 01**, WRT Table II.A.1.

e. I have updated my assumption of YouTube's estimated total performance royalty obligation to [redacted] of estimated revenues, or [redacted] of the assumed revenues derived from [redacted] subscribers.[3] This royalty amount is for all uses of music on YTP so it is a total cost incurred by Google even if only a portion of this amount is used to determine Google's Section 115 royalty obligation. *See* **Google Reb. Ex. 01**, WRT Table II.A.1.

f. I have calculated the royalties due based upon the Copyright Owners' proposed 2023 per performance rate of $0.0015 times 2021 actual performances rather than trying to estimate performances in 2023.

8. The calculations performed using the above assumptions show the outrageousness of the Copyright Owners' rate proposal. Even accounting for Allocation of Service Provider Revenues, TCC, and subscribers, Google would always pay royalties to Copyright Owners on their proposed [redacted] prong. Using YTP's [redacted] only, Google's Section 115 royalties would be [redacted]. *See* **Google Reb. Ex. 01**, WRT Tables II.A.5-2, II.A.6-2, and II.A.7-2. That represents [redacted] of the total estimated YTP revenue from [redacted] subscribers. And this is the amount due before accounting for Google's other royalty obligations

[3] *See* Higginson WDT ¶ 42.

to record labels for sound recording rights, to music publishers and Performing Rights Organizations ("**PROs**") for public performance rights, and music publishers for non-Section 115 activities. Google would never agree to such a royalty obligation. If one takes into account these other royalty obligations, Google's total fees to record labels, music publishers, and PROs would be approximately [redacted] of YTP revenues. *See* **Google Reb. Ex. 01**, WRT Table II.A.8-2.

9. Even if one eliminates the Copyright Owners' proposal for a per play rate (s*ee* **Google Reb. Ex. 01**, WRT Tables II.A.5-1, II.A.6-1, and II.A.7-1), the Copyright Owners' proposal would still impose an enormous burden on Google when taking into account Google's total royalty obligations to music publishers, record labels, and PROs. Based upon the above assumptions, the Copyright Owners' proposed rates would require Google to pay between [redacted] and [redacted] of total estimated revenues to all music copyright owners or their agents, with the [redacted] being the percentage using Total Allocation for Section 115 royalty calculation purposes and [redacted] being the percentage if no Allocation was permitted for Section 115 royalty calculation purposes. See **Google Reb. Ex. 01**, WRT Table II.A.8-1.

10. The details of these calculations are set forth in **Google Reb. Ex. 01** to this rebuttal statement.

B. Copyright Owners' Proposed Changes to Certain Definitions Are Contrary to Marketplace Agreements Negotiated Directly by Individual Music Publishers and Ignore the Centrality of Allocation in Agreements Negotiated in the Free Market

11. Copyright Owners propose to change the definition of "Offering" in a marked departure from market practice, including hundreds of license agreements entered into by the very members the National Music Publishers' Association ("**NMPA**") represents in this proceeding. Copyright Owners seek to expand the definition of "Offering" to include any

product or service "providing Licensed Activity," even if the service provides other content that is not "Licensed Activity." This appears to be an effort by Copyright Owners to collect mechanical royalties on ***all*** revenue earned by a service provider, including revenue generated from the use of content not eligible for licensing pursuant to Section 115. This would be inconsistent with the music publishers' market-based agreements with Google, which provide for the allocation of revenue and TCC based upon the ratio of Section 115-eligible activities to either

[redacted]

[redacted]. This structure—which forms the basis of every single agreement YouTube has entered into with a music publisher—ensures that musical publishers get paid their negotiated royalty rate on a category-by-category basis so that publishers are not double paid.

12. When I say "double payment," it is helpful to give an example to make this point. If Google has $100 in revenues and agrees to pay a music publisher 10% of revenue for Activity A and 15% of revenue for Activity B, one must necessarily determine what percentage of revenue should be allocated to Activity A and what percentage should be allocated to Activity B. If user engagement/consumption is split between Activities A and B 60/40, then the royalties to be paid to the licensor publisher would be as follows: ($100 x .6 x .10) + ($100 x .4 x .15), or $12. If one assumes that Activity B is eligible for statutory licensing pursuant to Section 115 at the same rate Google and the publisher agreed to in a direct license (i.e., 15%), the failure to provide for the allocation of revenue for Activity B under the statutory license would result in Google paying the following total royalties: ($100 x .6 x .10) + ($100 x .15), or $21. Under these facts, the publisher licensor would go from getting paid an effective rate of 12% of total

revenue to 21% of total revenue since they would be getting paid on a portion of the same revenue twice.

13. In conjunction with the proposed revision to the definition of "Offering," Copyright Owners have proposed to change the definition of "Service Provider Revenue," in a significant departure from market practice. Copyright Owners are proposing that Service Provider Revenue means "*all* Revenue in connection with any Licensed Activity, including (1) all Revenue in connection with a Subscriber's access to an Offering." What I interpret this edit to mean is that Copyright Owners are proposing to get paid on 100% of all YTP revenues for Section 115 activities and then again on portions of the very same revenue for activities that fall outside of the Section 115 license pursuant to their direct licenses with Google. The Copyright Owners' proposal for double payment is contrary to the structure of every agreement music publishers have negotiated and entered into in the marketplace with Google.

14. Notably, the Copyright Owners' rate proposal provides for allocation when it is to their benefit. Specifically, the Copyright Owners propose in Step 2 of their rate proposal that service providers may only deduct the portion of performance royalties allocable to Section 115 activities. This means that Copyright Owners are proposing to be paid on 100% of YouTube's revenues in Step 1 of their rate proposal but are proposing to allow YouTube to deduct only performance royalties paid for Section 115 eligible activities (what the Copyright Owners call Licensed Activity). The mismatch between Copyright Owners' proposed definitions of "Offering" and "Service Provider Revenue," on the one hand, which are not subject to any form of allocation, and Performance Royalties, on the other hand, which is subject to allocation, is nonsensical and would result in an unwarranted windfall to music publishers.

15. As I explained in my WDT, Google allocates revenues generated from YTP and YTMP for purposes of calculating its Section 115 royalties based upon the ratio between performances that are eligible for licensing under Section 115 and non-Section 115 eligible activities.[4,5] Under the majority of Google's voluntary agreements, Google also allocates between and among [redacted].[6] As also explained in my WDT, allocation is a critical component in Google's voluntary agreements because [redacted].[7] It is also critical because Google's offerings include content from non-music licensors.[8]

III. COPYRIGHT OWNERS' CLAIM THAT GOOGLE'S MLC DATA FOR YOUTUBE SVOD CONTAINS REPORTING ANOMALIES OR MISTAKES

16. I understand that Copyright Owners' expert, Dr. Eisenach, claims that Google's MLC data contains reporting anomalies or mistakes, one of which is [redacted]. Eisenach WDT, Appx. C at ¶¶ 19-22. I further understand that Dr. Eisenach therefore makes adjustments to Google's revenue, subscriber, and plays data based in part on that particular perceived mistake. *Id.*

17. I understand from Google's royalty reporting team that the reason for [redacted]

[4] Higginson WDT ¶ 34.
[5] Copyright Owners' proposal of a per-play rate implicitly recognizes that performances can be tracked and, thus, allocated between music and non-music content and Section 115-eligible and non-eligible uses.
[6] Higginson WDT ¶ 34.
[7] Higginson WDT ¶ 35.
[8] Higginson WDT ¶ 35.

[redacted].

18. Dr. Eisenach's adjustments are therefore incorrect and should not be relied upon.

IV. COPYRIGHT OWNERS' PROPOSAL TO ADOPT PER-PLAY RATES IS INCONSISTENT WITH AGREEMENTS NEGOTIATED IN THE FREE MARKET

19. As indicated above, Copyright Owners' rate proposal includes a "per-play" prong for Section 115-eligible activities. A per-play royalty rate, however, is not something that Google—in hundreds of agreements with U.S. music publishers—has ever agreed to for YTP or YTMP. Moreover, no music publisher has ever refused to enter into an agreement with Google for its refusal to agree to a per-play rate.

20. Google does not agree to per-play rates because increased usage/consumption could result in costs exceeding revenues or representing too high a percentage of revenues (as indicated above). In such situations, the Digital Service Providers (each a "**Service**" and, collectively, the "**Services**") would be incentivized to cap or discourage usage by paying subscribers to contain content costs. Capping or discouraging usage, however, detracts from the user experience with the music streaming service and could result in the loss of subscribers.

21. A per-play rate would be a minimum payment that must be made irrespective of the revenue received by Services from music streaming. As the Copyright Owners have proposed that the per-play rate apply to all Plays on all Offerings, their proposal would jeopardize ad-supported streaming since consumption could exceed advertising revenues. Moreover, a per-play rate, when combined with the royalties already paid for sound recordings, for non-Section 115 eligible activities of musical works, and performance rights of musical works, could result in the total royalties for an engaged user exceeding the monthly subscription fee paid by a user. That is not a sustainable business model, particularly in the present-day music streaming market where consumers typically pay either no fee for ad-based access to music streaming or an up-front charge (typically a monthly fee) for unlimited access to music streaming for each paid period.

V. THE DMCA'S "SAFE HARBOR" IS NOT A VIABLE TOOL FOR GOOGLE'S LICENSE NEGOTIATIONS

22. I understand that Copyright Owners contend the mechanical rates in Google's publisher license agreements are lower than the rates that would be generated in the free market because Google could threaten to invoke the Digital Millennium Copyright Act's ("**DMCA**") "safe harbor" provision to obtain lower royalty rates. I personally negotiate or oversee all of Google's license negotiations with music publishers. I do not recall being present in any negotiations where Google has claimed the DMCA's "safe harbor" as an argument for lower royalties or otherwise raised the DMCA when negotiating licenses for the right to use musical works on YTP and YTMP.

23. Google could not build a music service based on the DMCA's "safe harbor." In order to take advantage of the "safe harbor," YouTube would be required to take down material

whenever requested by the copyright owner pursuant to a valid takedown notice. YouTube would also have to terminate the accounts of repeat infringers as required by law. In order to build a viable music service, YouTube needs to offer consumers broad and reliable music coverage so that a diversity of music is available to satisfy the interests of different users. Relying primarily on material that could be subject to mandatory take-down procedures and account terminations would not allow YouTube to operate an appealing music service. That is why Google sought comprehensive licenses instead.

VI. GOOGLE DOES NOT UNDERPRICE ITS SUBSCRIPTION STREAMING PRODUCTS TO BENEFIT ITS BROADER "ECOSYSTEM"

24. I have reviewed the public versions of Copyright Owners' witness testimonies suggesting that Google underprices YouTube's subscription music services as part of a broader strategy to attract customers to other Google products and increase Google's "complementary revenue streams."[9] This is not true. YouTube's interactive streaming service, which includes YouTube Music Premium and YouTube Premium, is expected to stand on its own financially. I am focused on making YouTube's services profitable. I never consider whether YouTube Music Premium and YouTube Premium maximize other aspects of Google's business.

25. As of September 2021, YouTube Music and YouTube Premium had 50 million subscribers globally.[10] By contrast, Google's other product lines (including Search, Gmail, and Google Maps) reach hundreds of millions of people in the U.S. alone and billions of people worldwide.[11] The notion that Google intentionally drives down the price of those offerings to

[9] *See, e.g.*, COs' Corrected WDS Intro. Mem. at 9-15; Eisenach WDT ¶¶ 59-65; Watt WDT ¶¶ 70-77; Flynn WDT ¶¶ 54-62.

[10] https://blog.youtube/news-and-events/50-million/.

[11] https://www.cnet.com/tech/tech-industry/gmail-gave-google-the-confidence-to-take-over-the-world/; https://review42.com/resources/google-statistics-and-facts/#:~:text=Considering%20that%20there%20are%20almost,billion%20active%20users%20each%20month.

drive growth of its other product lines—such as Search, Gmail, or Google Maps—is therefore absurd.

26. I have also reviewed the public versions of testimony by Copyright Owners' witnesses suggesting that Google engages in revenue "deferral" by discounting its subscription fees to gain market share with the goal of collecting higher revenues in the future.[12] This claim is also false. Google does not intentionally depress subscription prices for YouTube Music Premium and YouTube Premium, or attempt to undercut the pricing of comparable services, in order to increase its market share. The subscription prices for Google's streaming products, including discounted prices for student and family offerings, are consistent with comparable products offered by other streaming services.[13] If anything, intense competition for subscribers in the market keeps prices to the consumer low.

VII. LICENSE NEGOTIATIONS INHERENTLY INVOLVE BILATERAL INFORMATION ASYMMETRY

27. I have reviewed the public versions of testimony by Copyright Owners' experts in which they claim that music publishers are disadvantaged by "information asymmetry" in license negotiations with the Services.[14] I disagree with this claim. I regularly negotiate license agreements with music publishers on behalf of Google,[15] and the supposed "asymmetry" and disadvantage to publishers is a fiction. In my experience, nearly all negotiations among

[12] Watt WDT ¶ 80; Spulber WDT ¶ 10.

[13] For example, YouTube Music individual plans are offered for $9.99 per month and Apple Music individual plans are offered for $9.99 per month. *See* https://music.youtube.com/music_premium, last visited April 7, 2022; https://music.apple.com/us/listen-now?ign-itscg=10000&ign-itsct=401x, last visited April 7, 2022. As another example, YouTube Premium family plans are offered for $17.99 per month and Spotify Premium family plans are offered for $15.99 per month. *See* https://www.youtube.com/premium, last visited April 7, 2022; https://www.spotify.com/us/family/?utm_source=us-en_brand_contextual_text&utm_medium=paidsearch&utm_campaign=alwayson_ucanz_us_performancemarketing_family_brand+contextual+text+exact+us-en+google&gclid=Cj0KCQjwl7qSBhD-ARIsACvV1X1q7E6Qkl6r-5u0MLpcPSyU6p4e1_MQyCQdKIjIxj3bbsOLDyU1WSAaAqzZEALw_wcB&gclsrc=aw.ds, last visited April 7, 2022.

[14] Spulber WDT ¶¶ 5-19; Eisenach WDT ¶¶ 58-67; Watt WDT ¶¶ 16-17, 70-77.

[15] I am not involved in negotiating license agreements with record label companies on behalf of Google.

sophisticated parties involve simultaneous information asymmetry. The counterparties with whom Google negotiates do not know every material piece of information about Google's business, and Google similarly does not know every material piece of information about the licensors' businesses. For example, the music publishers with whom Google negotiates do not share with Google the costs they incur to develop songwriters or to acquire catalogs, the advances they pay to songwriters, the royalty rates they pay to newly signed artists as well as Grammy-award winning songwriters, the strategy decisions music publishers and their affiliated record labels take when negotiating with Google, or the business and financial terms they negotiate with Google's competitors.

28. There is no basis to claim that publishers suffer from an information deficiency when negotiating with Google that is not mirrored by Google's lack of information about the publisher sitting across from it. For example, if music publishers are charging Google higher rates than Spotify or Apple for the exact same activities, that information would be material to Google in a negotiation. If a music publisher and its affiliated record label were coordinating to drive up Google's total costs of licensing content from those affiliated entities, that information would also materially inform Google in licensing negotiations. But this type of information is not known to Google and music publishers would typically not disclose it to Google. Given that both parties in Google's negotiations with music publishers withhold sensitive and competitive information from one another, there is no information asymmetry in the sense that one party knows more information than the other. In our negotiations, there are simply simultaneous gaps in information for both parties that each side takes into account when negotiating in the free market.

VIII. THE COPYRIGHT OWNERS' PROPOSED REVISIONS TO OTHER TERMS ARE INCONSISTENT WITH AGREEMENTS NEGOTIATED IN THE FREE MARKET AND SHOULD BE REJECTED

29. I understand that the Copyright Owners have proposed a number of revisions to other terms. Those revisions, however, are inconsistent with hundreds of voluntary license agreements between music publishers and Google and lack marketplace support.

A. Definition of "Licensed Activity"

30. The Copyright Owners continue to use the term "Licensed Activity" in their proposed terms as that is the term currently set forth in Section 385.2 of the Copyright Royalty Board's ("**CRB**") regulations. However, the 2018 amendments to Section 115 adopted the term "Covered Activity" and Google sees no reason to deviate from the term that Congress chose to adopt in the statute. To avoid any ambiguity, Google respectfully proposed that its definition of "Covered Activity" be adopted in lieu of the Copyright Owners' proposal of "Licensed Activity," as amended.

B. Definition of "Performance Royalty"

31. As I noted above, the Copyright Owners have adopted the concept of allocation when it benefits them (by reducing performance royalties paid by a statutory licensee) and rejected it elsewhere when it works to their detriment. But the Copyright Owners cannot have it both ways.

32. The Copyright Owners' proposed definition of "Performance Royalty" provides for an allocation of performance royalties paid for the public performance of musical works "[i]n the case in which the Service Provider is also engaging in the public performance of musical

works that does not constitute Licensed Activity."[16] The Copyright Owners propose that this allocation be done on the basis of Plays.

33. The Copyright Owners' proposal to only allocate Performance Royalties—which reduces the amount determined in Step 1 of the royalty calculation process under the current regulations, the Copyright Owners' proposal, and Google's proposal—is necessary but not sufficient. A Service should not be permitted to deduct Performance Royalties paid for non-Section 115 activities when calculating the amount due in Step 2. Such a deduction would be unfair to music publishers and songwriters who are to be paid for Section 115 activities. But the flip side to this allocation of Performance Royalties is that music publishers and songwriters should not be paid on revenues and TCC that are not attributable to Section 115 activities.

34. Google's proposed terms, on the other hand, properly and fairly account for the allocation of revenues, TCC, subscribers, and Performance Royalties. The Copyright Owners' proposal does not. Moreover, Google's proposal is supported by hundreds of license agreements entered into with music publishers. The Copyright Owners' proposal, on the other hand, lacks marketplace support.

C. Definitions of "Promotional Offering" and "Promotional Use"

35. The Copyright Owners have proposed deleting the definition of "Promotional Offering" from the existing regulations. Their proposed deletion is contradicted by hundreds of voluntary agreements negotiated directly between Google and music publishers and lacks marketplace support, and for good reason. Music publishers negotiating in the free market have recognized that Promotional Offerings are a means by which subscription Services can seek to

[16] *See, e.g.*, COs' Corrected WDS, Appendix B - Proposed Regulations [Redlined], at B-5.

attract new subscribers, and have therefore overwhelmingly agreed to it in their voluntary license agreements with Google.

36. As for the Copyright Owners' proposed definition of "Promotional Use," that proposal is contradicted by Google's marketplace agreements in which music publishers have agreed to allow Google to [redacted]."[17] The Copyright Owners' proposal to limit "Promotional Use" to instances where there is no charge simply lacks marketplace support.

37. Likewise, the Copyright Owners' proposal to condition the Promotional Use exception to instances where consumers are given the opportunity to "purchase the sound recording" lacks marketplace support. As consumers have moved from an ownership to a subscription model, conditioning the Promotional Use exception on providing links to purchase is no longer market practice.

D. Definition of "Relevant Page"

38. The Copyright Owners propose eliminating the definition of "Relevant Page." But this change, combined with their proposed changes to the definitions of "Offering" and "Service Provider Revenue," would not only raise payable royalties by an extraordinary amount but also expand the revenue base to include revenues that are unrelated to activities licensed pursuant to Section 115 of the Copyright Act.

39. The Copyright Owners' proposal is contradicted by the agreements that the music publishers represented by the NMPA have negotiated in the free market. As I described in my WDT, Google's negotiated definition of "[redacted]" has Google paying royalties only on

[17] *See* Corrected Google WDS, Google Ex. 06 (GOOG-PHONOIV-00002944-66), Exhibit A, Section 14.

revenue from [redacted] "[redacted]" is the analog to the concept of "Relevant Page" in the regulations, and is defined as follows:

[redacted]

40. If the definition of "Relevant Page" were deleted, as Copyright Owners propose, then the Copyright Owners would presumably claim that they are entitled to be paid based on all advertising revenue on YouTube—something that Google has never and would never agree to and something that no music publisher has ever requested. There is simply no marketplace evidence underpinning the Copyright Owners' proposal.

E. Definition of "Revenue"

41. The Copyright Owners have proposed a new, expansive definition of "Revenue" that is not limited to amounts recognized by a Service in accordance with GAAP or to amounts rationally tied to the use of musical works pursuant to the Section 115 license. Rather, under their proposal, Section 115 royalties would be paid on all Revenue "***in connection with*** any Licensed Activity" (emphasis added). The term "in connection with," however, is vague and appears to be intended to sweep in all revenues of YouTube and other similar services. Such a definition conflicts with marketplace evidence—namely, the hundreds of voluntary license agreements in which music publishers have agreed to payment of mechanical royalties on Section 115-eligible activities only.

42. The removal of the reference to GAAP also creates the possibility for significant disputes between Services, on the one hand, and The MLC or individual Copyright Owners, on the other hand. GAAP rules provide a recognized framework within which companies recognize

revenue. The regulations should continue to provide for the reporting of revenue in accordance with GAAP.

43. I have also revised Google's proposed definition of "Net Advertising Revenues" to remove language that I believe to be confusing (i.e., "and any carriage or in-app commission fees (if any)."

F. Definition of "Stream" and "Play"

44. The Copyright Owners have proposed modifying the definition of "Stream" to insert the word "copyrighted" before "musical work," such that the definition begins as follows: "*Stream* means the digital transmission of a sound recording of a copyrighted musical work to an End User. . . ."

45. The easiest way to explain the implication of this proposed edit is with an example. Assume a service that offers primarily jazz music where a material percentage of the underlying compositions are no longer subject to copyright protection. Further assume a price of $10 per month per subscriber and 100,000 subscribers, for total monthly revenues of $1,000,000. Further assume that the 100,000 subscribers listen to public domain jazz music 10% of the time and only listen to music that is subject to copyright 90% of the time.

46. Under the Copyright Owners' proposal, the $1,000,000 in subscription revenue would be multiplied by their proposed 20% of revenue rate. Assuming this was the rate prong that bound and ignoring for the moment any TCC prong, PSM prong, or Performance Royalty deduction, the resulting $200,000 would be allocated entirely to the 90% of listening to music that is still subject to copyright protection. This approach would attribute 100% of the consideration paid by the subscribers to 90% of the consumption on the service.

47. The $200,000 royalty pool under the above hypothetical inputs, however, should be allocated across 100% of the listening on the service on a musical work-by-musical work basis, treating works subject to copyright and works not subject to copyright equally in Step 4 of the royalty calculation methodology as it currently exists. After the allocation of the royalty pool across all works, only the amounts attributable to works subject to copyright (i.e., $180,000) should be payable by a licensee, whether directly to copyright owners or to The MLC. Amounts attributable to works not subject to copyright should be retained by the Service.

48. Because The MLC is authorized to "[m]aintain the musical works database"[18] and is only authorized to "[a]dminister a process by which copyright owners can claim ownership of musical works (and shares of such works), and a process by which royalties for works for which the owner is not identified or located,"[19] there is no statutory basis for paying copyright owners a share of royalties for which a copyright owner no longer has a right under U.S. copyright law. To do so would be contrary to the intent of Congress and inappropriately require Services to pay royalties for which musical works are not subject to copyright protection.

49. Google has also proposed a slight revision to the definition of "Play." We suggest removing the term "play" from the definition of "Play" to avoid any confusion and have instead inserted "local performance" as the phrase is modifying a performance of an Eligible Limited Download, which is a sound recording stored on an End User's local device. We have also adopted the Copyright Owners' proposal to exclude from the scope of Plays those performances that have been determined to not be initiated by a human user. As bots can be used to drive up

[18] 17 U.S.C. § 115(d)(3)(C)(i)(IV).
[19] 17 U.S.C. § 115(d)(3)(C)(i)(V).

streams illegitimately and therefore dilute royalties otherwise payable to publishers (and their writers), excluding such performances is appropriate.

G. Definition of "Subscriber"

50. The Copyright Owners have proposed adding a new definition to the regulations for "Subscriber" that would count each sub-account of a multiple user plan as a distinct Subscriber. For example, a family plan allowing up to six sub-accounts would count as six subscribers. This proposal is contradicted by Google's publisher license agreements, none of which contain such a provision. Google's direct benchmark agreements instead contain provisions like the following, which is from a Google [redacted] Publishing License Agreement previously submitted as part of my WDT:[20]

[redacted]

51. The Copyright Owners' proposal also lacks marketplace support. Indeed, I have never heard of any other marketplace agreements containing such a provision.

H. Definition of "TCC" (or Total Cost of Sound Recording Content)

52. The Copyright Owners have proposed amending the definition of "TCC" so that in Step 1 of the royalty calculation, the expenses for sound recordings would not be limited to amounts expensed in accordance with GAAP but rather, limited to any amounts "conveyed, paid

[20] *See* Corrected Google WDS, Google Ex. 06 (GOOG-PHONOIV-00002944-66), Exhibit A, Section 15.

or otherwise provided by the Service Provider for the right" to engage in Covered Activities. This approach is overbroad for at least two reasons.

53. First, the governing standard should be limited to amounts actually expensed by a Service Provider in accordance with GAAP, as expenses would then be easier to track and report and also for auditing purposes.

54. Second, the Copyright Owners' proposal could result in the same type of problem described in Section VIII.F above (Definition of "Stream" and "Play"). Another example is beneficial. Assume again the inputs as set forth above in paragraph 45 (100,000 subscribers paying $10/month, i.e., $1,000,000 in revenue, for a jazz service where 10% of the listening is to musical works in the public domain). Further assume that 100% of the sound recordings used on such service are still subject to copyright protection and that the royalty rate paid to sound recording copyright owners is [redacted] of revenue. With these inputs, assume the TCC expense is [redacted]. If 90% of the consumption of content on the service is to musical works still subject to copyright protection, then using [redacted] as the TCC input for a determination of Section 115 royalties would be improper. Rather, the [redacted] that is paid for the use of all sound recordings should be multiplied by a 90% allocation factor to limit the TCC to just those sound recordings of musical works subject to copyright protection. To provide otherwise would unjustly reward copyright owners for expenses incurred by a Service for musical works that are no longer subject to copyright protection under U.S. law. To avoid this type of unjust enrichment to Copyright Owners, the amount of TCC used for purposes of determining potential royalties under Section 115 should be tied to expenses for sound recordings of musical works still subject to copyright

protection. We have addressed this by inserting "copyrighted" in front of "musical work" in the definition of "Total Cost of Content or TCC."

I. Recordkeeping for Promotional or Free Trial Non-Royalty Bearing Uses

55. The Copyright Owners have proposed retaining certain recordkeeping obligations in the CRB's regulations. This is improper. Section 115, as amended, specifies what information must be reported to The MLC by a service operating under the Section 115 license.[21] In addition to such statutorily specified information, there is a possibility for "such other information as the Register of Copyrights shall require by regulation."[22] Nothing in Section 115, as amended, however, authorizes the Judges to impose additional recordkeeping obligations on the Services.

56. Where Congress has empowered the Judges to establish "terms" under the Section 115 license, those terms are limited to "terms of royalty payments for the activities specified by [Section 115]."[23] Section 385.4 of the current regulations should therefore be deleted, as Google has proposed.

J. Proposal for Annual Rate Adjustment

57. The Copyright Owners have proposed adjusting the Subscriber rate and Play rate each year in accordance with the Consumer Price Index ("**CPI**"). Although the Judges have adopted inflation adjustments in regulations for other statutory licenses (e.g., Section 114), such an adjustment is contradicted by marketplace agreements entered into between willing buyers and willing sellers. None of Google's agreements with music publishers contain CPI adjustments for the PSMs contained in those agreements. The Copyright Owners' proposed CPI adjustment to PSMs is simply unsupported by marketplace evidence.

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[21] See 17 U.S.C. § 115(d)(4)(A).
[22] See 17 U.S.C. § 115(d)(4)(A)(III).
[23] See 17 U.S.C. § 115(c)(1)(E).

K. Proposed Per Sub Minimum Fee

58. The Copyright Owners have proposed increasing the PSM from $0.50 to $1.50, and, as noted above, applying this minimum to each End User with an account or sub-account to a Subscription Offering. This is contradicted by Google's voluntary, direct licenses, none of which have a PSM anywhere close to the level that the Copyright Owners seek.

59. Even more troubling, though, is the combination of this dramatic rate increase with Copyright Owners' proposed revisions to the definition of "Subscriber," as discussed above. In combination, Copyright Owners' proposal would destroy Family Plan offerings. This is not a result that would have any support in the market, given the prevalence of Family Plan offerings in direct benchmark agreements.

60. For example, Google offers a YouTube Premium Family Plan for up to six total End Users in a single household for $17.99 per month. Under Google's direct licenses with hundreds of music publishers, the PSM that Google currently pays to its voluntary, direct licensors for this Family Plan is an amount equal to [redacted] of the otherwise stated PSM. As the PSM in Google's voluntary, direct licenses is [redacted], the PSM for a Family Plan is [redacted].

61. The Copyright Owners, however, are proposing that the PSM for Section 115-eligible services under similar Family Plan accounts should be $9.00 ($1.50 x 6), or 50.028% of the total revenue Google would receive from a Family Plan subscription. There is no marketplace evidence from any of Google's hundreds of agreements that would support such a rate proposal.

L. Proposed Accounting Regulations

62. Google has proposed streamlining the reporting requirements in Section 385.21(d) of the CRB's regulations to align with the amendments made to Section 115 in 2018. The

Copyright Owners, however, seek to retain prescriptive provisions in the regulations and modify the reporting provisions in the existing regulations. As noted above, the Judges have limited statutory authority when it comes to specifying the information to be reported under the Section 115 license. That authority is vested in the Register of Copyrights.

M. Proposal to Delete Royalty Floors for Specific Types of Offerings

63. The Copyright Owners have proposed deleting 37 C.F.R. 385.22 ("Royalty floors for specific types of offerings") in its entirety, including, inter alia, eliminating the adjustments made for Student Plans and Family Plans and other royalty floors for the different types of offerings reflected in the existing regulations.

64. This is contradicted by benchmark agreements and unsupported by marketplace evidence. Each of Google's hundreds of agreements with music publishers contains options for [redacted] and [redacted] when it comes to determining the [redacted]. That music publishers have overwhelmingly accepted the concept of [redacted] And as further noted in my WDT, Google regularly obtains authorization from music publishers to offer other types of promotional accounts to attract subscribers to its services. [redacted][24] The regulations under Section 115 should reflect this—and other types of promotional plans—because this is what willing buyers and willing sellers have actually agreed to and would agree to.

[24] *See* Corrected Google WDS, Google Ex. 16 (GOOG-PHONOIV-00002209-58), Exhibit B, Section 14(f) [redacted]

Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: **DETERMINATION OF ROYALTY RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (*Phonorecords IV*)**	**Docket No. 21-CRB-0001-PR (2023-2027)**

DECLARATION OF CARLETTA HIGGINSON

I, Carletta Higginson, declare under penalty of perjury that the statements contained in my Written Rebuttal Testimony in the above-captioned proceeding are true and correct to the best of my knowledge, information, and belief.

Executed this 21 day of April, 2022 in New York, New York.

Carletta Higginson

TAB B

Before the

UNITED STATES COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: **DETERMINATION OF ROYALTY RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (*Phonorecords IV*)**	**Docket No. 21-CRB-0001-PR (2023-2027)**

WRITTEN REBUTTAL TESTIMONY OF DR. GREGORY K. LEONARD

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I. QUALIFICATIONS AND ASSIGNMENT

1. My name is Gregory K. Leonard. I am an economist and Vice President at Charles River Associates (CRA), 601 12th Street, Suite 1500, Oakland, CA, 94607.

2. My qualifications are presented in the Written Direct Testimony of Dr. Gregory K. Leonard, dated October 13, 2021, and corrected on March 4, 2022, which I have previously submitted in this matter.

3. I have been asked by Google to review and comment upon the expert reports issued on behalf of the Copyright Owners, including: (1) Written Direct Testimony of Jeffrey A. Eisenach, Ph.D., dated October 13, 2021 ("Eisenach WDT"); (2) Written Direct Testimony of Robin Flynn, dated October 13, 2021 ("Flynn WDT"); (3) Written Direct Testimony of Daniel F. Spulber, dated October 13, 2021 ("Spulber WDT"); and (4) Written Direct Testimony of Richard Watt (PHD), dated October 13, 2021, and corrected on November 10, 2021 ("Watt WDT").

4. In the course of my analysis, I have reviewed the documents and other information listed in Appendix B to this Written Rebuttal Statement. Specific documents and other information cited as support in this testimony are not meant to be an exhaustive listing of all such documents or information.

5. My analysis and this report are based on information currently available to me. I reserve the right to augment or update opinions based on information learned in ongoing discovery.

II. SUMMARY OF OPINIONS

6. I have reached the following opinions:

- Google's direct PLAs with music publishers represent the best evidence of WBWS rates for the Phono IV proceeding.

- Google's direct PLAs with music publishers that embrace [redacted] are the most comparable to the Section 115 license.
- Google's direct PLAs are comparable to the Section 115 license because they are the result of arm's-length negotiations, cover musical works rights, involve the same licensors and licensees, and many have [redacted]
- Furthermore, under Google's direct PLAs, Google has agreed to pay music publishers [redacted]

- Allocation of revenues to different types of content before application of the Section 115 *Phono IV* rates is economically rational and supported by marketplace benchmarks.
  - It makes economic sense to allocate across different types of content offered by a subscription service to avoid the double payment of royalties.
  - Google's direct PLAs with music publishers offer real-world WBWS evidence of the implementation of allocation [redacted]
  - Additionally, Google's Label Interactive Deals relied on by Dr. Eisenach also contain allocation provisions [redacted]

- Publishers and songwriters have thrived as interactive music streaming has grown.
  - [redacted]
  - [redacted]
  - Publishing catalogs have been sold for significant sums.
  - Publishers and songwriters have significant sources of revenue other than interactive streaming mechanicals.

- [redacted]
  - [redacted]
  - [redacted]
  - [redacted]

- Dr. Eisenach's benchmark analysis is unsupported and incomplete.
  - The *Phono III* rates represent a WBWS outcome and not a floor for the *Phono IV* rates.
  - Dr. Eisenach's benchmark analysis using the Label Interactive Deals relies on inappropriate sound recording to musical works ratios that generate results that are unreliable, inconsistent with the WBWS standard, and do not support the Copyright Owners' excessive Proposed Rates.

- Dr. Eisenach's reliance on Label Interactive Deals is also misplaced because they are not comparable to the Section 115 license for several reasons, including that they [redacted]
- Dr. Eisenach's reliance on audio-visual streaming licenses is misplaced because they are not comparable to the Section 115 license for several reasons, including that [redacted]

- Copyright Owners' experts claims about "parallel revenues," "asymmetric information," and "asymmetric risk" should be afforded no weight.
  - Copyright Owners' experts provide no valid empirical support for their claims.
  - Copyright Owners' experts ignore contrary evidence, such as the fact that publishers have "asymmetric information" about their own alternative revenue sources.

- Dr. Watt's Shapley Value model is unreliable.
  - Dr. Watt incorrectly assumes that songwriters/publishers should receive the same Shapley Value as artists/labels.
  - The Shapley Value construct incorporates considerations that are not necessarily present in willing buyer/willing seller outcomes.
  - Dr. Watt provides no empirical support for his assumed revenue function and parameter values.
  - Dr. Watt's claim that his Shapley Value model eliminates complementary oligopoly power is incorrect.
  - Dr. Watt's estimate of songwriter costs makes no economic sense.

III. OVERVIEW OF THE MUSIC PUBLISHING INDUSTRY

7. According to the Copyright Owners' experts, the condition of the music publishing industry is characterized by profound challenges that warrant an increase in the Section 115 rates. The Copyright Owners further argue that this increase in rates is supported by the shift to the WBWS standard, and that mechanical royalties (1) represent only a small cost to the interactive music streaming services but constitute a substantial portion of the income for music publishers and songwriters and (2) play an important role in ensuring the continued

viability of songwriting as a profession.[1] However, the Copyright Owners' depiction of the state of the music publishing industry in general, and songwriters in particular, is incomplete and inaccurate.

8. In recent years there have been a number of music publishing catalogs purchased at substantial prices indicating that music publishing assets are viewed by investors as attractive long-term investments. For example, Universal Music Group ("UMG") purchased Bob Dylan's music publishing catalog for approximately $400 million at the end of 2020.[2] Additionally, in 2021, Bruce Springsteen sold both his sound recordings and music publishing catalogs to Sony Music Entertainment ("SME") for a total of approximately $550 million,[3] Neil Young sold a 50% share of his music publishing catalog to Hipgnosis for approximately $150 million,[4] and Paul Simon sold his music publishing catalog to Sony Music Publishing ("SMP") for approximately $250 million.[5] More recently, Sting reportedly sold his entire music publishing catalog to Universal Music Publishing Group ("UMPG") for about $300 million in early 2022.[6] Kohlberg Kravis Roberts, a private equity firm, acquired a majority stake in the music publishing catalog of Ryan Tedder, a lead vocalist of the band OneRepublic and songwriter for many popular artists, for reportedly $200 million in early 2021.[7] Other popular artists such as Red Hot

[1] Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords IV), Docket. No. 21–CRB–0001–PR (2023–2027), Corrected Written Direct Statement of the Copyright Owners, Introductory Memorandum, October 27, 2021.
[2] Tim Ingham "Music Catalogs Are Selling for Serious Cash. Now Wall Street Wants In," *RollingStone*, January 13, 2021; Tim Ingham "Universal's Bob Dylan Catalog Buy Is About Survival," *RollingStone*, December 8, 2020.
[3] Ben Sisario "Bruce Springsteen Sells Music Catalog in Massive Deal," *The New York Times*, December 15, 2021.
[4] Tim Ingham "Hipgnosis Acquires 50% of Neil Young's Song Catalog for Around $150m," *Music Business Worldwide*, January 6, 2021.
[5] Ariel Shapiro "Inside Paul Simon's Catalog Sale: At $250 Million, It's One of Music's Biggest," Forbes, April 30, 2021.
[6] Anne Steele "Sting Sells Songwriting Catalog of Solo Work and Hits by the Police," *The Wall Street Journal*, February 10, 2022.
[7] Tim Ingham "Music Catalogs Are Selling for Serious Cash. Now Wall Street Wants In," *RollingStone*, January 13, 2021.

Chili Peppers and Imagine Dragons recently sold their music publishing catalogs for approximately $140 million and $100 million, respectively.[8] The purchase prices of these music publishing catalogs reflect the healthy royalty streams that the catalogs are expected to generate in the future.

9. As seen in Figure 1 below, more than $4 billion was spent purchasing publishing rights to songwriter's catalogs in 2019, compared to about $1 billion in 2016.[9] Music Business Worldwide ("MBW") estimated that in 2021, "at least $5.05 billion was spent on catalog and music rights acquisitions."[10] MBW further suggests that due to some non-disclosed sales, the $5.05 billion figure "might just be the tip of the iceberg."[11] In addition to the number of transactions (catalog sales) increasing, repeated sales of publishing assets demonstrate that their value has been increasing. For example, CitiGroup sold EMI Music Publishing ("EMP") to a group led by Sony for $2.2 billion in 2012, but EMP was reportedly valued at $4.75 billion in late 2018 when Sony fully acquired EMP from the other investors.[12]

[8] Shakira also sold her entire catalog to Hipnosis Songs Fund for an undisclosed amount. *See* Ethan Millman "Red Hot Chili Peppers Sell Catalog to Hipgnosis," *RollingStone*, May 3, 2021; Tim Ingham "Concord Music Publishing Acquires Imagine Dragons Catalog in $100m+ Deal," *Music Business Worldwide*, August 17, 2020; Tim Ingham "Hipgnosis Buys 100% Of Shakira's Publishing Catalog, Spanning 145 Songs," *Music Business Worldwide*, January 13, 2021.

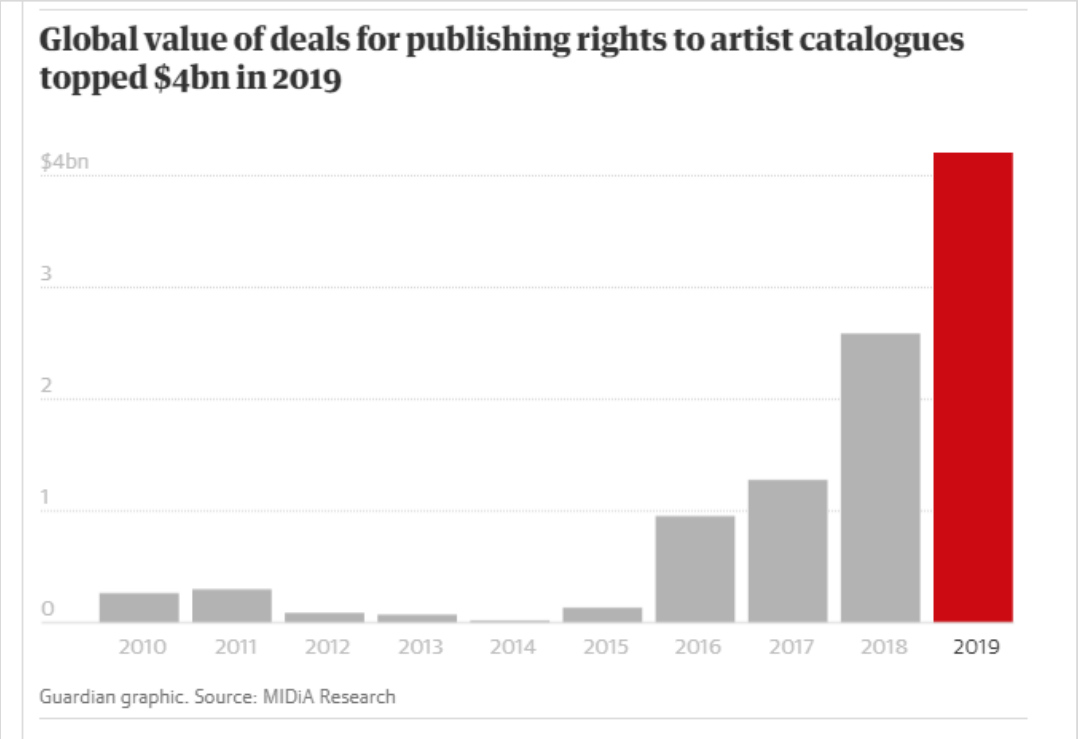
[9] Mark Sweney "Going for a song: why music legends are lining up to sell their rights," *TheGuardian*, December 11, 2020.

[10] Murray Stassen "At Least $5 Billion Was Spent on Music Rights in 2021. Could 2022 Be Even Bigger?" *Music Business Worldwide,* January 10, 2022.

[11] Murray Stassen "At Least $5 Billion Was Spent on Music Rights in 2021. Could 2022 Be Even Bigger?" *Music Business Worldwide,* January 10, 2022.

[12] Tim Ingham "Music Catalogs Are Selling for Serious Cash. Now Wall Street Wants In," *RollingStone*, January 13, 2021.

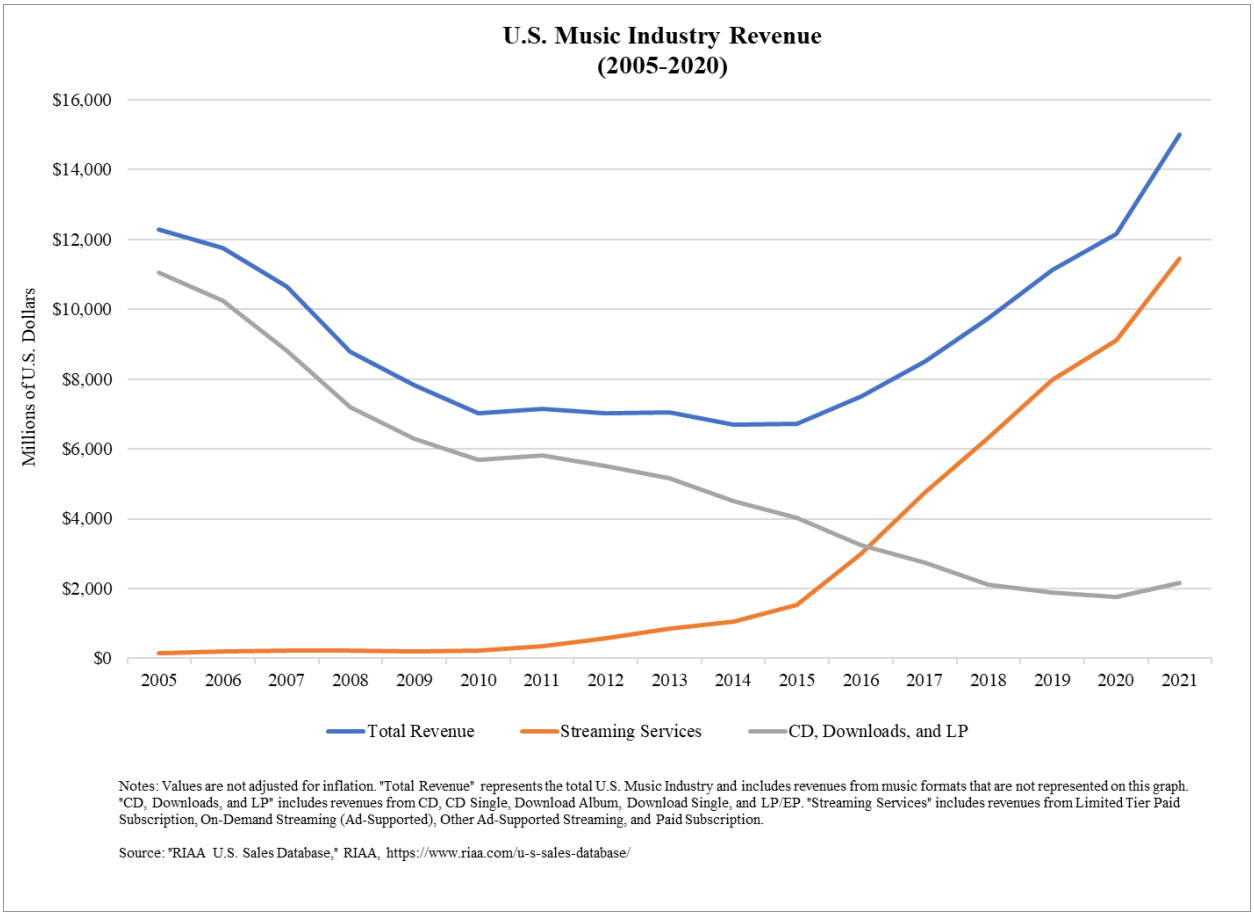
Figure 1:



10. The growing investor interest in the music industry stems, in part, from the rise of music streaming services, which reversed what had been a long-term decline in music revenues (*see* Figure 2 below).[13] As stated by Marzio Schena, CEO and co-founder of music royalty platform ANote Music, "the universal appeal [from] predictable revenue streams and the wide-scale global reach" are what attracts investors to the industry and music catalogs as potential investments.[14]

[13] Lawin Miclat "Investment flows as Streaming Services revive music industry," *BS Capital Markets,* December 31, 2019.
[14] Sadie Whitelocks, "The private equity firm that has sparked the trend for music investment," *iNews,* August 11, 2021.

Figure 2:



11. While the COVID-19 pandemic caused a decline in revenue from performances, global recorded music revenue nevertheless increased by 7.4% in 2020, largely due to music streaming.[15] In addition, contrary to what the Copyright Owners argue, the financial condition of the music publishers supports the conclusion that the industry is thriving.[16] The respective parent companies of the three largest music publishers are publicly traded, and thus subject to financial reporting obligations. Their financial reports show that they have generated increasing

[15] Maera Tezuka and Annie Sabater, "PE firms take slice of music royalties amid surge in streaming revenue," *SP Global,* October 28, 2021.

[16] While publishers invest in the support and promotion of songwriters, the services have made substantial investments in developing and operating their streaming services. For example, Spotify's witness, Benjamin Kung, describes Spotify's investments. See Corrected Written Direct Testimony of Benjamin Kung, Oct. 22, 2021, ¶ 41.

revenues in recent years. Specifically, in 2021, the Big Three music companies (Sony Music Group ("SMG"), UMG, and Warner Music Group ("WMG")) totaled $21.55 billion in global music publishing and recorded music revenues, compared to $17.8 billion in 2020, an increase of 21%.[17] Separately, the music publishing revenues from these Big Three music companies totaled $4.12 billion in 2021, compared to $3.41 billion in 2020, an increase of 21%.[18] From a profitability perspective, the publishing business of the Big Three music companies have also demonstrated strong results in recent years. For example, UMPG reported EBITDA margins that [redacted] in fiscal year 2016 [redacted] in fiscal year 2020, with a range from [redacted] during that period.[19] Warner Chappell reported OIBDA margins of [redacted] in fiscal year 2016 and [redacted] fiscal year 2020, with a range from [redacted] during that period.[20] SMP reported an Operating Income margin of [redacted] in fiscal year 2020 and an Operating Income margin before depreciation and amortization of [redacted] in the same year.[21]

12. A further sign of the health of the songwriting and publishing industries is continued growth in songwriting activity. Annual reports from ASCAP and BMI, two of the largest performance rights organizations ("PROs"), reveal that the number of songs being created

[17] In 2021, global music publishing and recorded music revenues for WMG totaled $5.58 billion; for SMG totaled $7.49 billion; and for UMG totaled $8.48 billion. In 2020, global music publishing and recorded music revenues for WMG totaled $4.625 billion; for SMG totaled $6.047 billion; and for UMG totaled $7.16 billion. These values are calculated by MBW and converted into calendar years and U.S. dollars. *See* "Every 2 hours, The Major Music Companies Now Jointly Generate More than $5 million," Music Business Worldwide, at https://www.musicbusinessworldwide.com/every-2-hours-the-major-music-companies-now-jointly-generate-more-than-5-million/.

[18] In 2021, music publishing revenues for WMG totaled $815 million; for SMG totaled $1.72 billion; and for UMG totaled $1.58 billion. In 2020, music publishing revenues for WMG totaled $674 million; for SMG totaled $1.44 billion; and for UMG totaled $1.30 billion. These values are calculated by MBW and converted into calendar years and U.S. dollars. *See* "Every 2 hours, The Major Music Companies Now Jointly Generate More than $5 million," Music Business Worldwide, at https://www.musicbusinessworldwide.com/every-2-hours-the-major-music-companies-now-jointly-generate-more-than-5-million/.

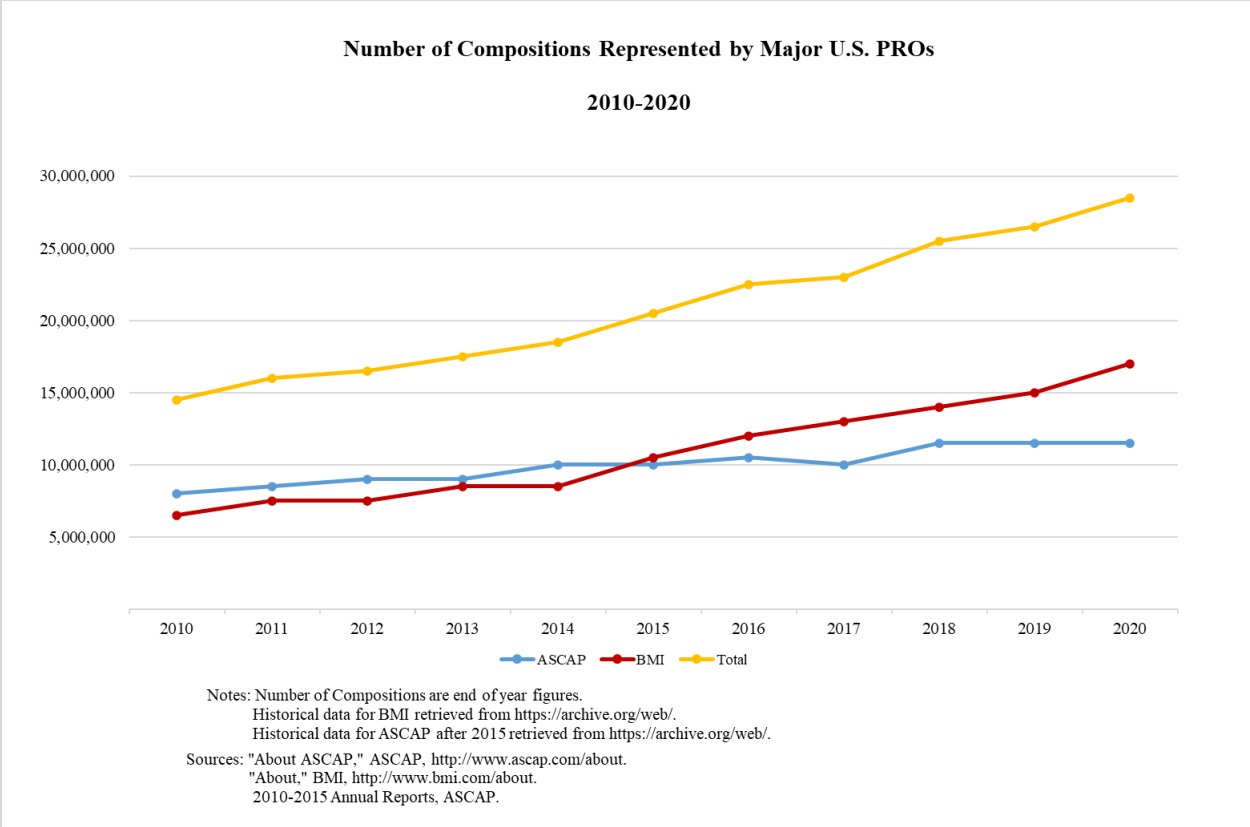
[19] COEX 1.5, Line 154.

[20] COEX 6.2, Line 264.

[21] COEX 4.12, Lines 10, 20, 26-27. Operating Income margin before depreciation and amortization is equal to Operating Income (Line 26) plus Depreciation and Catalog Amortization (Line 20), then divided by Total Revenue (Line 10).

has increased over time, and there is no evidence of substantial exit by songwriters from the industry. As illustrated in Figure 3 below, the combined number of compositions represented by ASCAP and BMI has steadily increased over the past decade, from just under 15 million in 2010 to almost 30 million in 2020.[22]

Figure 3:

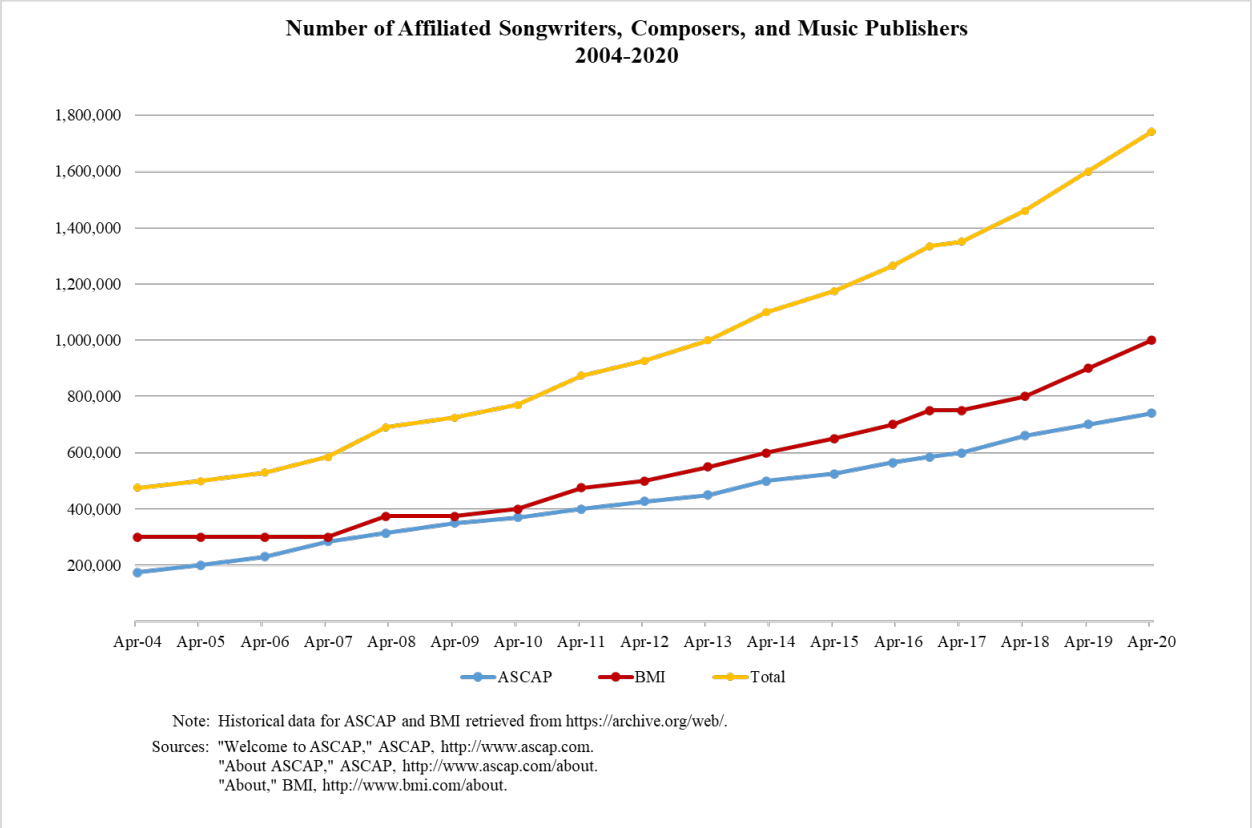


[22] These figures understate the growth in compositions because they do not account for other PROs, including SESAC and GMR, which have taken songwriters away from ASCAP and BMI in recent years. For example, GMR recently announced it signed pop star Abel "The Weeknd" Tesfaye who was previously affiliated with ASCAP. *See* GMR, "GMR Newsletter," April 2022, https://globalmusicrights.com/files/newsletter/2022/Q1/GMR%20Newsletter%20April%202022.pdf; Chris Willman, "The Weeknd Named Songwriter of the Year at ASCAP Pop Awards; Post Malone's 'Circles' Is Top Song," *Variety*, April 13, 2021, https://variety.com/2021/music/news/ascap-pop-music-awards-weeknd-songwriter-1234949944/.

13. As illustrated in Figure 4 below, the number of affiliated songwriters, composers, and music publishers represented by ASCAP and BMI has also grown considerably over time, increasing from 0.77 million in 2010 to 1.74 million in 2020, an increase of 125%, substantially greater than the 10.1% growth in the U.S. adult (age 18+) population over the same period.[23] Prior to 2019, the total number of members had been growing at around 8% per year, but in recent years the growth rate has been higher, over 9% per year. Thus, not only are songwriters not exiting the industry, but they are in fact joining the two largest PROs at a higher rate than before.[24] Songwriter witness testimony that "songwriting will cease to be a viable profession"[25] is not consistent with the fact that the number of songwriters has been growing over time.

[23] Ogunwole et al., "U.S. Adult Population Grew Faster Than Nation's Total Population From 2010 to 2020," *US Census*, August 12, 2021.
[24] Again, these figures will understate the total increases in songwriters given that ASCAP and BMI have lost songwriters to "upstart" PROs such as GMR.
[25] Bogard WDT ¶ 4.

Figure 4:



14. Finally, as illustrated in Figure 2 above, the music industry's revenues reversed what had been a long-term downward trend, driven mostly by music streaming. Music streaming accounts for 83% of U.S. music industry revenue in 2020, which is up from 34.3% in 2015.[26] Given that musical works royalties generally are based directly on revenues or indirectly on revenues via subscribers, these trends imply that songwriters are receiving higher overall royalty payments, consistent with the rising music publishing catalog transaction prices.

15. It is important to recognize that mechanical royalty payments from interactive music streaming are not the only source of revenue for songwriters and even publishers. For example, [redacted]

[26] RIAA Year-End Music Industry Reports (2020, 2019, 2018, 2017, 2016, 2015).

[redacted][27] [redacted][28] This demonstrates that growth in mechanical royalties from interactive music streaming have more than kept pace with growth in revenues from other sources. These other sources of revenue for publishers include [redacted][29] Songwriters in general receive royalties from these other sources as well.[30] A songwriter who is also a performing artist will also receive royalties from the exploitation of their sound recordings. The number of different types of digital services that generate payments to music publishers and songwriters has been growing over time. For example, the advent of social media apps like TikTok, Snap, Facebook, and Instagram promoting the ability to produce short videos with music on their platforms has provided publishers and songwriters with significant new sources of royalty revenue.[31]

[27] COEX-1.3, COEX-4.5, COEX-6.2. I note that [redacted]

[28] COEX-1.3, COEX-4.5, COEX-6.2. I note that [redacted]

[29] COEX-1.3, COEX-4.5, COEX-6.2.

[30] 84 Fed. Reg. at 1922.

[31] Maera Tezuka and Annie Sabater, "PE firms take slice of music royalties amid surge in streaming revenue," *SP Global,* October 28, 2021; "TikTok and Universal Music Group Sign Global Licensing Deal," Music Business Worldwide, February 8, 2021, https://www.musicbusinessworldwide.com/tiktok-and-universal-music-group-sign-global-licensing-deal/; "TikTok strikes new licensing agreement with Sony Music," TechCrunch, November 2, 2020, https://techcrunch.com/2020/11/02/tiktok-strikes-new-licensing-agreement-with-sony-music/; Tim Ingham, "Social Media, Not Streaming, Is the Music Industry's Future," RollingStone, December 2, 2020, https://www.rollingstone.com/pro/features/social-media-tiktok-instagram-video-games-music-money-1097428/.

16. I understand that several of the Copyright Owners have made claims that their mechanical royalty income, and other sources of income, have declined since the rise of music streaming.[32] However, data produced by these Copyright Owners in this proceeding demonstrates that these claims are misleading. According to [redacted]

Despite Copyright Owners' claims that streaming has reduced their mechanical royalty and other

[32] *See, e.g.*, Beekman WDT ¶¶ 53-74; Kelly WDT ¶¶ 56-90; Yocum ¶¶ 46-65.
[33] Beekman WDT ¶ 43, fn. 2.
[34] COEX-1.3.
[35] Yocum WDT ¶ 15.
[36] COEX-6-5; COEX-6.2.
[37] COEX-4.5.

sources of income, the reality is that the publishers have substantially greater total revenues today following the growth of streaming than they did back in 2009 and 2014 before streaming was a significant source of revenue.

17. Further, the most important determinant by far in a songwriter's royalty payments is the popularity of the songwriter's songs. As is the case in many areas of entertainment, songwriting is a "hit"-driven market, with a relatively small percentage of songwriters achieving substantial success, as measured by number of plays or royalties earned, and the large majority of songwriters receiving relatively few plays and royalties earned. I have reviewed data produced by Copyright Owners on the payouts publishers made to individual songwriters by year.

Table 1:

Percentiles of Mechanical Payout Distribution by Publisher in 2020

	BMG	Kobalt	SME	UMPG	Warner Chappell
Number of Songwriters	[redacted]				
10th Percentile					
25th Percentile					
50th Percentile					
75th Percentile					
90th Percentile					

Note: Songwriters with annual royalties of less than $0.005 were discarded.

Sources: Google Reb. Ex. 04 (P4-BMG00446383); Google Reb. Ex. 05 (P4-KOBALT00000933); Google Reb. Ex. 06 (P4-KOBALT00000934); Google Reb. Ex. 07 (P4-SMP00000909); Google Reb. Ex. 08 (P4-SMP00002923); Google Reb. Ex. 09 (P4-UMPG00004171); Google Reb. Ex. 10 (P4-WARNER_CHAPPELL00000590).

Table 1 above provides the percentiles of the payout distribution by publisher in 2020. [redacted]

[redacted]

[redacted] and can be found in Appendix E1. These results demonstrate that the payout distribution is [redacted] Another way to summarize the payout distribution is to ask what percentage of songwriters account for a given percentage of the publisher's total payouts in a given year.

Table 2:

Percentage of Songwriters Accounting for 50/75/90% of Total Mechanical Payouts by Publisher in 2020

	BMG	Kobalt	SME	UMPG	Warner Chappell
Number of Songwriters	[redacted]				
50% of Total Payouts					
75% of Total Payouts					
90% of Total Payouts					

Note: Songwriters with annual royalties of less than $0.005 were discarded.

Sources: Google Reb. Ex. 04 (P4-BMG00446383); Google Reb. Ex. 05 (P4-KOBALT00000933); Google Reb. Ex. 06 (P4-KOBALT00000934); Google Reb. Ex. 07 (P4-SMP00000909); Google Reb. Ex. 08 (P4-SMP00002923); Google Reb. Ex. 09 (P4-UMPG00004171); Google Reb. Ex. 10 (P4-WARNER_CHAPPELL00000590).

Table 2 above presents this analysis. Using [redacted] A third way to summarize the payout distribution is to ask what percentage of songwriters received more than a certain level of payout.

Table 3:

Percentage of Songwriters With Mechanical Payouts Exceeding $50,000/$100,000 by Publisher in 2020

	BMG	Kobalt	SME	UMPG	Warner Chappell
Number of Songwriters					
>$50,000					
>$100,000					

Note: Songwriters with annual royalties of less than $0.005 were discarded.

Sources: Google Reb. Ex. 04 (P4-BMG00446383); Google Reb. Ex. 05 (P4-KOBALT00000933); Google Reb. Ex. 06 (P4-KOBALT00000934); Google Reb. Ex. 07 (P4-SMP00000909); Google Reb. Ex. 08 (P4-SMP00002923); Google Reb. Ex. 09 (P4-UMPG00004171); Google Reb. Ex. 10 (P4-WARNER_CHAPPELL00000590).

These results are provided in Table 3 above. [redacted] even if the percent of revenue prong for mechanical royalties increased by one-third (from the *Phonorecords III* ("*Phono III*") pre-remand rates) as Copyright Owners propose. Moreover, the [redacted]

18. Overall, the economic evidence is inconsistent with Copyright Owners' claims that publishers face dire challenges that call for the substantial increases in Section 115 mechanical royalties that would result from their Proposed Rates. With rising valuations of music publishing catalogs, sustained year-over-year growth derived predominantly from music

streaming services, and more sources of revenue for songwriters than ever before, the music publishing industry has been thriving, along with those songwriters who write the most popular songs.

19. Finally, it is also important to distinguish between songwriters and publishers. A songwriter may contract with a publisher to perform certain services related to mechanical and other non-performance royalties.[38] These services include promotion of the songwriter's musical works, creative support, and administrative services related to the collection of royalties.[39] The publisher typically also gives an advance to the songwriter, against which future royalties are recouped.[40] The advance serves as "insurance" for the songwriter, as it is typically non-refundable.[41] In return for its services, the publisher retains a portion of the royalties. In a traditional publishing deal, the publisher receives a 50% cut of the royalties received for the songwriter's musical works and the songwriter receives the other 50%. In a co-publishing deal, the publisher receives 50% of the publisher's share of royalties (25% of the total) and the songwriter receives the other 50% of the publisher share (25% of the total) and 100% of the songwriter share (50% of the total). Under the narrowest arrangement, the publisher provides only administrative services and receives a lower cut of the royalties [redacted].[42] An [redacted]

[38] The songwriter contracts separately with a PRO for certain services related to public performance royalties.
[39] Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords IV), Docket. No. 21–CRB–0001–PR (2023–2027), Corrected Written Direct Statement of the Copyright Owners, Introductory Memorandum, October 27, 2021.
[40] Brodsky WDT ¶ 29.
[41] *Id.*
[42] *Id.* ¶ 26.

[redacted][43] It is important to note that these [redacted]

20. In the hypothetical WBWS transaction central to this proceeding, it is the publisher rather than the songwriter that is the "seller" in the transaction. If the cumulative royalties received on a songwriter's catalog to date have not exceeded the advance the publisher paid the songwriter, an increase in the royalties would go entirely to the publisher, with none going to the songwriter. Even after the cumulative royalties have exceeded the advance, a songwriter with the broadest arrangement would receive only 50% of an increase in the royalties.

[43] Kelly WDT ¶ 74; Beekman WDT ¶ 51; Yocum WDT ¶ 43.
[44] *See* Google Reb. Ex. 11 (P4-UMPG00004582). [redacted]
[45] *See* Google Reb. Ex. 12 (P4-WARNER_CHAPPELL00001525). [redacted]

IV. OVERVIEW OF THE COPYRIGHT OWNERS' PROPOSAL

21. The Copyright Owners' Proposed Rates consist of an all-in (mechanical and public performance rights) royalty equal to the greater of 20% of revenue and 40% of TCC (referred to as the "all-in royalty pool"). The mechanical royalty is, in turn, equal to the greater of the following three components:

- All-in royalty pool less public performance royalties;
- Mechanical per-play royalty equal to $0.0015 multiplied by the number of plays (referred to as the "per-play prong"); and
- Mechanical per-subscriber royalty equal to $1.50 per month multiplied by the number of subscribers (referred to as the "per-subscriber prong"). The per-subscriber prong is not applicable for limited or free non-subscription/ad-supported service offerings.[46]

Additionally, the Copyright Owners' Proposed Rates remove the subscriber discounts for family (1.5 subscribers) and student (0.5 subscribers) plans.[47]

22. Compared to the final year of the *Phono III* rates, the Copyright Owners' Proposed Rates include a 32% increase in the percentage of revenue component, a 53% increase in the percentage of TCC component, and a 200%-900% increase in the per-subscriber prong.[48] Furthermore, the Copyright Owners' Proposed Rates include a per-play prong, which has never been a component of the mechanical royalty calculation under any of the *Phonorecords* proceedings. As I will discuss in detail below, contrary to Dr. Eisenach's claim that the benchmark agreements that he relies on "demonstrate that both the structure and the level of the Proposed Rates are economically reasonable and consistent with the willing buyer/willing seller standard,"[49] his proposed benchmark agreements in fact are not comparable to the Section 115

[46] Corrected Copyright Owners' Proposed Rates and Terms, at 6-9.
[47] Corrected Copyright Owners' Proposed Rates and Terms, at 27.
[48] Eisenach WDT ¶ 70, Table 2.
[49] Eisenach WDT ¶ 71.

license at issue in this proceeding and do not support such extreme increases in the percentage of revenue rate, percentage of TCC rate, and per-subscriber rate, or the creation of a new per-play prong.

V. GOOGLE'S PROPOSAL IS SUPPORTED BY THE MOST RELEVANT EVIDENCE IN THIS MATTER

A. Google's Direct PLAs with Music Publishers Represent the Best Evidence of WBWS Rates

23. Contrary to Dr. Eisenach's supposed benchmark agreements, Google's direct PLAs with music publishers represent the best evidence of the appropriate WBWS rates for the Section 115 license in this proceeding for several reasons. First, the Google PLAs are the result of direct, arm's-length negotiations between Google and music publishers. Second, the Google PLAs cover [redacted] Third, the Google PLAs involve [redacted] Fourth, the Google PLAs involve the [redacted] Fifth, I understand that the term for many of the Google PLAs include [redacted] As discussed in detail below, none of the supposed benchmark agreements used by Dr. Eisenach (e.g., Label Interactive Deals, blanket licenses for audio-visual streaming) are comparable or support the higher Copyright Owners' Proposed Rates.

24. Furthermore, as discussed in my WDT, the Google PLAs provide the best evidence of the appropriate WBWS rates for the Section 115 license in this proceeding for an additional and significant reason. Specifically, I understand that the definition of the Audio-

Only Tracks category is sufficiently broad that it [redacted] Moreover, Audio-Only Tracks that [redacted] As a result, the freely-negotiated, agreed-upon terms—[redacted]—in the Google PLAs for non-Section 115 eligible streams that were the outcome of an arm's-length, WBWS negotiation provide an excellent benchmark against which to evaluate a WBWS outcome for Section 115-eligible streams.[50]

B. Other Benchmarks Support the Google Proposal

25. The *Phono III* Final Determination found that Pandora's non-interactive service was a useful benchmark and noted that the sound recording to musical works ratio for this service was 4.65:1.[51] The sound recording royalty rate for non-interactive services is set by the CRB under the WBWS standard (with effective competition). The musical works rate (for performance rights) for non-interactive services is set in the shadow of the rate court (which similarly requires rates to be set at fair, competitive levels). Thus, the non-interactive ratio has rates the parties or tribunal has determined to be approximately effectively competitive in both the numerator and denominator. Furthermore, the 4.65:1 sound recording to musical works ratio derived from Pandora's non-interactive service is significantly higher than the unreasonable and unsupported ratios used by Dr. Eisenach [redacted].

26. In my WDT, I had noted that the March 2, 2021 proposed Section 385 Subpart B settlement represented a benchmark that supports Google's proposal.[52] The proposed settlement

[50] Leonard WDT ¶¶ 64, 81.
[51] Phonorecords III, Final Determination, at 51.
[52] Leonard WDT ¶¶ 85-87.

had several important dimensions of comparability to the Subpart C license: the licensors—music publishers—are the same; the licensees—labels (Subpart B) and interactive music streaming services (Subpart C)—are economically similarly situated in that both are seeking a license to musical works rights so that they can provide a sound recording embodying a performance of the musical work to end users; and PDDs and interactive music streaming are economically similar because a user who purchases a PDD "owns" it and can listen to it as often as desired without further charge and a user of an interactive music streaming service is situated similarly to the PDD purchaser in that after paying the subscription fee the streaming user can listen to the track as often as desired without further charge.

27. I understand that the Judges subsequently withdrew the proposed rule adopting the March 2, 2021 proposed Section 385 Subpart B settlement.[53] As an initial point, I understand that the RIAA maintains that the proposed settlement is binding on all parties to this proceeding except for George Johnson. In that case, it would remain an appropriate benchmark of a WBWS agreement.[54] I further understand the NMPA to represent all American music publishers.[55]

28. From my review of the Judges' Order, it appears that a point of concern to the Judges was that the Subpart B royalty had remained the same in dollar terms (i.e., 1.75 cents per minute, with a minimum of 9.1 cents per track) for an extended period of time (this rate was first

[53] Determination of Rates and Terms for Making and Distributing Phonorecords (Phonorecords IV), Proposed rule; withdrawal, Fed. Reg. Vol. 87, No. 61 (Mar. 30, 2022).
[54] *See* Joint Record Company Participants' Emergency Motion for Clarification and Request for Extension, April 5, 2022, at 3-7.
[55] *See* "Our Mission," NMPA, https://www.nmpa.org/mission/. ("Founded in 1917, the National Music Publishers' Association (NMPA) is the trade association representing all American music publishers and their songwriting partners. Its mission is to protect, promote, and advance the interests of music's creators. The NMPA is the voice of both small and large music publishers and is the leading advocate for publishers and their songwriter partners in the nation's capital and in every area where publishers do business.").

set in 2006).[56] According to RIAA data on PDD retail pricing, PDD prices increased from $0.99 to $1.09 between 2006 and 2021, an increase of 8.4%.[57] If the 1.75 cents per minute royalty were increased by the same 8.4%, the royalty would be 1.90 cents per minute (with a minimum of 9.9 cents per track). Alternatively, the royalty could be expressed as a percentage of the average PDD retail price as of 2006, and that percentage of revenue royalty rate could be applied to PDD retail prices going forward (this approach would also have the benefit of accounting for any future changes in PDD retail prices). Dividing the effective per song royalty rate of 9.5 cents[58] (taking into account song length) by the 2006 average PDD retail price of $0.99 yields a percentage of revenue royalty rate of 9.6%.

29. Increasing the PDD per minute royalty to match the percentage increase in PDD retail prices, or alternatively, changing over to a percentage of revenue royalty rate, with the rate equal to the effective PDD royalty per song divided by the 2006 PDD retail price, would address the Judges' expressed concern about the proposed Subpart B settlement.[59] If such an adjustment to the settlement were made, the PDD royalty (in percentage of revenue terms) would continue to represent a useful benchmark for interactive music streaming that would support the conclusion that Google's proposed all-in musical works rate is conservative.

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[56] *See* 87 Fed. Reg. at 18347-48.

[57] "U.S. Sales Database," The Recording Industry Association of America, https://www.riaa.com/u-s-sales-database/.

[58] The effective royalty rate per song is sourced from the *Phono III* determination. It is calculated by multiplying the effective percentage royalty rate of 9.6% by the retail PDD price of $0.99. *See* Leonard WDT, Appendix E.

[59] The Judges' concern does not arise when the royalty is specified to be a percentage of revenue, as is the case with Google's Proposal for the all-in musical works rate. In that case, the dollar per unit royalty increases when the product price increases.

VI. WILLING BUYERS AND WILLING SELLERS WOULD NOT AGREE TO THE COPYRIGHT OWNERS' PROPOSED DEFINITIONS AND CERTAIN OTHER TERMS

A. Copyright Owners' Proposed Definitions of "Offering" and "Service Provider Revenue" Seek to Prevent Allocation

30. The Copyright Owners' proposed definition for "Offering" includes a "product or service offered by a Service Provider providing Licensed Activity."[60] Under the current Section 115 regulations an "Offering" is limited to a "Service Provider's engagement in Licensed Activity."[61] I understand that the Copyright Owners' proposed definition of "Offering" seeks to expand that definition to include any product or service that incorporates Licensed Activity. Read in conjunction with the Copyright Owners' proposed definition of "Service Provider Revenue," which would include "all Revenue in connection with any Licensed Activity, including: (i) all Revenue in connection with a Subscriber's access to an Offering,"[62] I understand that the Copyright Owners' proposal would require Google and other interactive music streaming services to pay Section 115 royalties on non-Section 115 eligible content if such content is included in a product or service that provides Licensed Activity. Thus, I understand that the Copyright Owners' proposed definitions for "Offering" and "Service Provider Revenue" seek to remove allocation from the Section 115 regulations.

B. Copyright Owners' Proposed Definitions of "Offering" and "Service Provider Revenue" Are Inconsistent with the [redacted]

31. Dr. Eisenach argues that marketplace evidence supports the Copyright Owners' proposed definitions of "Offering" and "Service Provider Revenue."[63] However, with regards to

[60] Copyright Owners' Proposed Rates and Terms, Appendix B-5; Eisenach WDT ¶ 165.
[61] *See* 37 CFR § 385.2.
[62] Copyright Owners' Proposed Rates & Terms, Appendix B at B-5, B-9; Eisenach WDT ¶ 174.
[63] Eisenach WDT ¶¶ 168-173, 175-180.

the treatment of allocation this is not true. The Google PLAs directly negotiated with music publishers contain [redacted]

32. From a theoretical perspective, specific to the services and copyrights at issue in this proceeding, demand for the interactive music streaming services, and thus the subscription revenue that is generated from users, is driven by the different types of content offered by the service. Furthermore, a user's willingness to pay for, demand for, and ultimately the profit-maximizing subscription price of the interactive music streaming service (all else equal) increase with the number of different types of content offered by the service. Therefore, it makes economic sense that the subscription revenue from the interactive music streaming service must be allocated across the different types of content offered by the service before the Section 115 royalty rates are applied to avoid double payment of royalties. Economically rational actors such as the interactive music streaming services would not agree to the double payment of royalties based on unallocated subscription revenue. Without allocation of subscription revenues, interactive music streaming services that offer multiple forms of content would be making significant overpayments in royalties to music publishers, effectively resulting in royalty payments under the Section 115 statutory license on revenue that is attributable to content that is outside the scope of the license.[64]

33. This theoretical perspective regarding allocation is evident in marketplace benchmarks. For example, the Google PLAs demonstrate how [redacted] As

[64] Dr. Spulber complains that Google offering a "bundle" of YouTube Premium and YouTube Music makes it difficult to allocate a portion of the bundle price to Section 115 content. Spulber WDT ¶ 11. However, he is apparently unaware that the Google PLAs perform just such an allocation.

discussed and analyzed extensively in my WDT, the large majority of the Google PLAs with music publishers contain [redacted][65]

34. Additionally, none of the "benchmarks" used by Dr. Eisenach actually refute this evidence (i.e. [redacted]) of allocation. For example, Google's Label Interactive Deals with [redacted][66] In [redacted][67] For the remaining Label Interactive Deals and other benchmarks relied upon by Dr. Eisenach, allocation was generally irrelevant and unnecessary for various reasons including they did not have [redacted]

[65] Leonard WDT ¶¶ 59-60; Higginson WDT ¶¶ 33-37.
[66] COEX-7.28 at GOOG-PHONOIII-00005832, GOOG-PHONOIII-00005827-5828, GOOG-PHONOIII-00005829-5830; COEX-7.25 at GOOG-PHONOIII-00005533-5534, GOOG-PHONOIII-00005526-5527, GOOG-PHONOIII-00005529; COEX-7.26 at GOOG-PHONOIII00005618-5619, GOOG-PHONOIII-00005616, GOOG-PHONOIII-00005612-5613.
[67] COEX-7.30 at PAN_PRIII_Remand_00018885.

[redacted].

C. An Effectively Competitive WBWS Outcome Would Not Include the Multiple Backstops in the Copyright Owners' Proposed Rates

35. The Copyright Owners have proposed that the Section 115 royalty calculation include multiple prongs: percentage of revenue, TCC, per-subscriber, and per-play. However, neither the Copyright Owners nor their experts point to any currently effective license agreements for interactive music streaming services that contain such a large array of prongs. Google's currently effective PLAs with music publishers contain [redacted] The Label Interactive Deals that Dr. Eisenach uses as benchmarks contain [redacted].

36. The practical difficulty with multiple prongs is that it is difficult to know in advance how they might interact and affect the royalty calculation.[68] This would make willing buyers and sellers hesitant to include the large number of prongs that the Copyright Owners propose.

37. A second problem with the Copyright Owners' proposed multiple prongs is that they are set at such high levels that one of the prongs is likely to bind in some circumstances, even early in the *Phono IV* term.[69] In that case, the binding prong, not the all-in percentage of revenue royalty rate, would be the determinant of the royalty. This outcome would be

[68] Dr. Spulber offers a long theoretical discussion of how a structure with many prongs is similar to a financial option. Spulber WDT ¶¶ 42-59. However, this discussion simply illustrates the practical difficulties with such a structure. Notably, Dr. Spulber provides no empirically based values for the inputs to the valuation formula (e.g., the parameters of the joint distribution of the underlying random variables). Without such information, the parties to a WBWS agreement would be unable to set the parameters of the prongs correctly.

[69] See Google Reb. Ex. 01, which demonstrates that under the Copyright Owners' Proposed Rates the per-play prong is the prong that will bind using inputs consistent with those relied upon in Ms. Higginson's statement.

inconsistent with what I understand to be the purpose of the prongs as "backstops." If they are meant to be backstops, the prongs should bind only if some future event, unforeseen in the present, renders the all-in percentage of revenue rate "too low." Backstops should not bind from the outset. In Google's PLAs, [redacted]

38. Dr. Spulber makes a number of theoretical arguments as support for Copyright Owners' proposal that the Section 115 statutory license include multiple prongs (per subscriber, per play, and "uncapped" TCC). However, he provides no empirical analysis to demonstrate that his theoretical arguments are of significant importance or even that they apply at all to the facts of this case. For example, as discussed above, he simply assumes, rather than demonstrates using evidence, that the services have substantial "asymmetric information" about the causal effects of interactive music streaming on other revenue streams. Dr. Spulber claims that "adjusting the rate structure…would generate more information"[70] without identifying what "information" would be generated or the effects such additional "information" would have. He argues that, as a theoretical matter, with both ad-supported and subscription services, it "may" be efficient for a service to assess a usage fee within the subscription service.[71] However, Dr.

[70] Spulber WDT ¶ 24.

[71] Spulber WDT ¶¶ 30-34. Dr. Spulber also offers an example of a bridge for which there is a fixed cost of building, but a zero marginal cost of usage. He argues that it would not make sense to charge a zero toll because then the cost of the bridge would not be covered. Spulber WDT ¶ 33. However, Dr. Spulber's use of this example (in which he has assumed there is no "subscriber fee") is absurd here, given that [redacted] His "oil" example (Spulber WDT ¶ 8) is likewise absurd in that it is totally disconnected from the facts of this case (he assumes the buyer has no knowledge of the oil, but the Copyright Owners are obviously "aware"–incorrectly, as it turns out–of the supposed effects of interactive music streaming on services' other revenues).

Spulber provides no empirical analysis to demonstrate that the necessary conditions for this to be true hold for interactive music streaming. Indeed, he appears to ignore the basic fact that the services have chosen [redacted], which suggests that Dr. Spulber's theoretical argument does not apply.

39. Dr. Spulber argues that an uncapped TCC prong is needed because the labels are able to protect themselves from the "asymmetric information" and this protection can be transferred via the TCC prong to the publishers.[72] However, this argument rests entirely on the assumption that there is substantial "asymmetric information," for which Dr. Spulber has failed to provide any empirical support. Moreover, he does not explain how the labels are able to solve the asymmetric information problem while the publishers are not. He points to [redacted][73] However, at most the label-service agreements suggest only that the [redacted]

40. Dr. Spulber suggests that the Section 115 license needs more prongs than just the uncapped TCC prong because the labels have more revenue sources than publishers, which causes the labels' incentives to diverge from those of the publishers.[74] As noted above, however, he gets the facts wrong–publishers have other revenue sources as well, some of which overlap

[72] Spulber WDT ¶ 37.

[73] Spulber WDT ¶ 37. I note that he does not identify any specific agreements he finds relevant or meaningful.

[74] Spulber WDT ¶ 39. Dr. Spulber also claims that a TCC prong may be undermined because "the Streaming Companies" "may" acquire sound recording assets in the future. Spulber WDT ¶ 39. Dr. Spulber provides no evidence to support this speculative claim. In fact, "the Streaming Companies" have had the opportunity to buy the various publishing and sound recording catalogs that have been sold in recent years, or to acquire UMG or Warner when those companies went public in 2021 and 2020, respectively, but they did not do so.

with those of the labels (e.g., concerts) and some of which exist without a record label analog (e.g., terrestrial radio performance rights). In any event, Dr. Spulber does not empirically demonstrate that any difference in incentives is substantial enough to be a relevant consideration in this proceeding.

41. Dr. Spulber argues that the "greater of" structure does not give an advantage to the Copyright Owners.[75] However, which party has an advantage is dependent on the parameters of the structure, and Dr. Spulber has provided no empirical analysis related to those parameters. More generally, although he asserts that the Section 115 license should contain multiple prongs, Dr. Spulber provides no opinion as to what the parameters of those prongs should be (e.g., at what level a per subscriber minimum should be set), nor does he even provide a framework for determining the parameters.

42. Dr. Spulber claims that multiple prongs are needed because the Copyright Owners have no control over services' choices regarding the attributes of their services.[76] However, it is common for an input supplier engaged in a WBWS transaction with a downstream customer not to have "control" over how that customer sets the attributes of its products. Thus, the WBWS framework does not mandate that the Section 115 license account for lack of "control." Moreover, the publishers could enter into the interactive music streaming business themselves if they believed they could do better if they had "control."

[75] Spulber WDT ¶ 44.
[76] Spulber WDT ¶ 45.

VII. WILLING BUYERS AND WILLING SELLERS WOULD NOT AGREE TO THE COPYRIGHT OWNERS' PROPOSED RATES

A. The *Phono III* Rates Represent a WBWS Outcome, Not a Floor for the *Phono IV* Rates

43. Dr. Eisenach claims that the *Phono III* rates represent a floor for the *Phono IV* rates using the following line of reasoning: (1) licensing agreements between publishers and services [redacted]; (2) even if the WBWS rates were above the *Phono III* rates, a publisher would not have been able to obtain those rates because the service could fall back on the compulsory license and get the *Phono III* rates; (3) if, however, the WBWS rates were below the *Phono III* rates, the services could have obtained those rates by threatening to walk away from the publisher; (4) as a consequence of (2) and (3), the *Phono III* rates must be below the WBWS rates; and (5) the *Phono III* rates must be a floor for the (WBWS) *Phono IV* rates.[77] However, this line of reasoning is flawed because Dr. Eisenach's claim that a service could walk away from a major publisher is wrong as a practical matter. Without the major publisher's catalog, the service would have a large gap in its offering, undercutting its ability to offer to consumers a broad array of sound recordings on-demand.[78] Thus, a service's threat to walk away from a major publisher would not be credible. Accordingly, Dr. Eisenach has no sound basis to conclude that *Phono III* rates should be considered a floor for the *Phono IV* rates.

44. Moreover, the Google direct PLAs with music publishers, including Google's agreements [redacted] relied on by Dr. Eisenach, demonstrate that the [redacted]

[77] Eisenach WDT ¶¶ 32, 102.

[78] Fractional ownership means that the share of musical works a service would give up by virtue of not having a license to a given publisher's catalog is greater than that publisher's ownership share of musical works.

[redacted][79] Specifically, [redacted] As a result [redacted] an excellent benchmark for the WBWS outcome for Section 115-eligible streams under *Phono IV*.

45. Furthermore, many of Google's PLAs with music publishers [redacted]. For example, I understand that all of the [redacted][82]

The music publisher counterparties voluntarily agreed to these terms. This is further evidence that the *Phono III* rates represent WBWS rates, not a floor for the *Phono IV* rates.

[79] Leonard WDT, Appendix C1; COEX-2.16; Higginson WDT ¶ 25.
[80] Appendix C.
[81] Appendix C.
[82] Leonard WDT, Appendix C1.

B. Dr. Eisenach's Reliance on Label Interactive Deals Is Misplaced

1. Overview of Dr. Eisenach's Benchmark Analysis Based on Label Interactive Deals

46. Dr. Eisenach relies on [redacted] (referred to as the "Label Interactive Deals") to support the percentage of revenue and per-subscriber rates in the Copyright Owners' Proposed Rates. He relies on only [redacted] to support the per-play rate in the Copyright Owners' Proposed Rates. According to Dr. Eisenach, the Label Interactive Deals "provide [redacted][84]

47. Dr. Eisenach determines that the percentage of revenue rates for licensing sound recording rights in [redacted] He applies his assumed 2.5:1 sound recording to musical works ratio to this range of percentage of revenue rates for sound recordings to calculate the percentage of revenue rates for musical works ranging from [redacted]. Dr. Eisenach also applies Dr. Watt's 1.36:1 sound recording to musical works ratio to this range of percentage of revenue rates for sound recordings to calculate percentage of revenue rates for musical works ranging from [redacted][85] Dr. Eisenach

[83] Eisenach WDT ¶ 72.
[84] Eisenach WDT, fn. 73.
[85] The total royalty rate (for sound recordings and musical works combined) implied by Dr. Watt's 1.36:1 ratio would be [redacted] As noted in fn. 132, there is no evidence of a significant see-saw effect.

concludes that these benchmark musical works rates are above the Copyright Owners' Proposed Rate of 20% of revenue.[86]

48. Dr. Eisenach determines that [redacted] He applies his assumed 2.5:1 sound recording to musical works ratio to this range of per-subscriber rates for sound recordings to calculate per-subscriber rates for musical works ranging from [redacted]. Dr. Eisenach also applies Dr. Watt's 1.36:1 sound recording to musical works ratio to this range of per-subscriber rates for sound recordings to calculate per-subscriber rates for musical works ranging from [redacted]. Because the per-subscriber prong in the Copyright Owners' Proposed Rates is mechanical-only, Dr. Eisenach calculates and subtracts public performance royalties of [redacted] per subscriber per month for subscription services from these all-in musical works rates. This generates benchmark mechanical musical works rates ranging from [redacted][87] Dr. Eisenach concludes that these benchmark mechanical musical works rates show that the Copyright Owners' Proposed Rate of $1.50 per subscriber per month is conservative.[88]

49. Finally, Dr. Eisenach determines that the per-play rates for licensing sound recording rights in eight of the [redacted]

[86] Eisenach WDT, Table 3, ¶ 86.

[87] The total royalty rate per subscriber per month (for sound recordings and musical works combined) implied by Dr. Watt's 1.36:1 ratio would be [redacted]. As noted in fn. 132, there is no evidence of a significant see-saw effect. This level of total royalty would exceed the $9.99 monthly subscription fee charged by services for individual subscribers.

[88] Eisenach WDT Table 3, ¶¶ 87-88.

[redacted][89] However, Dr. Eisenach determines that [redacted][90] As a result, Dr. Eisenach limits his analysis of per-play rates to the remaining [redacted] The [redacted][91] [redacted][95]

50. In the following sections I present my response to Dr. Eisenach's benchmark analysis based on the Label Interactive Deals. First, I will address the fact that the Label

[89] Eisenach WDT ¶ 92; Eisenach WDT Workpapers, Output, "05 Table 3 and ¶¶86-88, 92, 94-95.xlsx."
[90] Eisenach WDT ¶ 93.
[91] Eisenach WDT Workpapers, Output, "05 Table 3 and ¶¶86-88, 92, 94-95.xlsx."
[92] Eisenach WDT Workpapers, Output, "05 Table 3 and ¶¶86-88, 92, 94-95.xlsx."
[93] Eisenach WDT Workpapers, Output, "05 Table 3 and ¶¶86-88, 92, 94-95.xlsx."
[94] Eisenach WDT ¶ 94.
[95] Eisenach WDT ¶¶ 95-96.

Interactive Deals are not comparable to the Section 115 license and, therefore, are not valid benchmarks for establishing the rates and terms in this proceeding. Second, I explain why the 2.5:1 and 1.36:1 sound recording to musical work ratios used by Dr. Eisenach are inappropriate. Third, I discuss how the Copyright Owners' Proposed Rates would have unreasonable economic effects.

2. The Label Interactive Deals Are Not Comparable to the Section 115 License

51. The Label Interactive Deals are not comparable to the Section 115 license at issue in this proceeding for several reasons. First, these agreements do not [redacted] The Label Interactive Deals include [redacted] There is evidence in the record that sound recording and musical works rights differ fundamentally,[96] with the contributions of the recording artist tending to be more valuable than those of the songwriter.[97] When one considers the dynamics of the music industry, the relatively greater contribution of the recording artist makes economic sense. A popular artist has many potential substitute songs that he or she could record, while a songwriter has a smaller number of potential substitutes for a popular artist to record his or her song. Indeed, it is not uncommon for a prominent recording artist to be pitched thousands of songs for one album.[98] Songs on an album are also likely to be "inside" songs written by the artist, producer, or someone else involved in the project, leaving only one or

[96] For example, *see* Determination of Reasonable Rates and Terms for the Digital Performance of Sound Recordings and Ephemeral Recordings, Final rule and order, Vol. 67, No. 130, 45246 (July 8, 2002).
[97] *See, e.g.*, Rebuttal Expert Witness Statement of Dr. Gregory K. Leonard, Phonorecords III, at ¶¶ 116 and 134, citing a Goldman Sachs analyst report ("[L]abels generally take a higher percentage of that pie than publishers, as is the case with physical and digital sales. This harkens back to the industry perspective that labels invest much more to sell the 'single' than publishers so they are entitled to more."). "Music in the Air: Stairway to Heaven," Goldman Sachs, October 4, 2016, p. 29.
[98] "I Know I've Got A Great Song: Now What?," BMI, March 25, 2014; "Now What? Inside Songwriting," TAXI, August 2008.

two slots available for "outside" songwriters.[99] Moreover, research has shown that a music style becomes less instrumentally complex and more homogeneous as it increases in popularity.[100] Composers aiming to write a hit song have to compete in a market with little variety and high interchangeability. When two parties negotiate over the split of a pie, the party with the more attractive set of alternatives generally earns a larger share of the pie.[101] Because the recording artist has a greater set of alternatives (including writing his or her own songs), the artist would be expected to earn a larger share of the pie than the songwriter.

52. Second, the licensors in the Label Interactive Deals are record labels while the licensors in the Section 115 license are music publishers. It has been well established through the findings in the *Phono III* proceeding, as well as in the *Web IV* and *Web V* proceedings, that the record labels have complimentary oligopoly power.[102] The complimentary oligopoly power of the record labels leads to royalty rates above the effectively competitive level and it is inappropriate to use them as benchmarks in this proceeding based on the effectively competitive WBWS standard. Evidence presented in the other proceedings suggests that sound recording rates are above the effectively competitive level.[103] Moreover, labels have demanded and

[99] Gamaliel Percino, Peter Klimek, and Stefan Thurner, "Instrumentational Complexity of Music Genres and Why Simplicity Sells," PLOS ONE, 2014; "Scientists Just Discovered Why All Pop Music Sounds Exactly the Same," Mic, January 7, 2015.
[100] Gamaliel Percino, Peter Klimek, and Stefan Thurner, "Instrumentational Complexity of Music Genres and Why Simplicity Sells," PLOS ONE, 2014; "Scientists Just Discovered Why All Pop Music Sounds Exactly the Same," Mic, January 7, 2015.
[101] Put another way, economic value is driven by scarcity. An entity for which fewer substitutes exist is more scarce and thus more valuable.
[102] Determination of Royalty Rates and Terms for Making and Distributing Phonorecords (Phonorecords III), Final Rule, Fed. Reg. Vol. 84, No. 24, 1964 (Feb. 5, 2019); Determination of Rates and Terms for Digital Performance of Sound Recordings and Making of Ephemeral Copies to Facilitate Those Performances (Web V), Final Rule, Fed. Reg. Vol. 86, No. 205, 59457-78 (Oct. 27, 2021); Determination of Royalty Rates and Terms for Ephemeral Recording and Webcasting Digital Performance of Sound Recordings (Web IV), Final Rule, Fed. Reg. Vol. 81, No. 84, 26344 (May 2, 2016); Second Supplemental Written Remand Testimony of Dr. Gregory K. Leonard, Phonorecords III (Remand), at ¶¶ 4-7.
[103] 86 Fed. Reg. at 59461-65.

received "anti-steering" and "most favored nations" provisions from interactive streaming services, which further limit competition among labels.[104] In the *Web IV* proceeding, label witnesses acknowledged the lack of price competition between labels.[105] Nothing in Dr. Eisenach's benchmark analysis accounts or adjusts for the supracompetitive royalty rates in the Label Interactive Deals, rendering them incomparable.

53. Furthermore, some of the [redacted] of the Copyright Owners' Proposed Rates suffer from additional comparability issues. First, Dr. Eisenach's opinion that [redacted] "should be given little or no weight"[106] means that his entire per-play benchmarking analysis relies on [redacted] These [redacted] represent just a fraction of the Copyright Owner-produced documents and license agreements in this proceeding, which means that Dr. Eisenach's benchmark analysis pertaining to the per-play prong of the Copyright Owners' Proposed Rates is supported by limited evidence. In fact, [redacted] strongly supports the conclusion that a per-play prong in the Section 115 statutory license is not warranted. Furthermore, more importantly, I understand that Google does not [redacted].[107]

54. Second, the per-play rates in the three Label Interactive Deals used by Dr. Eisenach involving [redacted]

[104] *Id.* at 59462-63.
[105] 81 Fed. Reg. at 26344.
[106] Eisenach WDT ¶ 93.
[107] Higginson WDT ¶ 49.

[redacted][108] Prime Music is a bundled service that is included in an Amazon Prime membership subscription, and only Amazon Prime members have access to this service.[109] Amazon's unique position in the music streaming industry due to its bundled offerings was discussed in *Phono III* and it was noted that [redacted][110] As I pointed out then, [redacted] should not be used as benchmarks because its unique bundled offering makes it an outlier in the music streaming industry among the services.

3. The 2.5:1 and 1.36:1 Sound Recording to Musical Works Ratios Are Unsupported

55. The assumed 2.5:1 sound recording to musical works ratio is a key input into Dr. Eisenach's benchmark analysis.[111] This 2.5:1 ratio comes from the "Shapley-inspired" model put forward in the *Phono III* proceeding by Dr. Gans, an expert retained by the Copyright Owners. Dr. Eisenach claims that the *Phono III* Final Determination adopted the 2.5:1 ratio.[112]

[108] License Agreement between [redacted] (AMZN_Remand_0000159, COEX-7.22); License agreement between [redacted] (AMZN_Remand_0000229, COEX-7.23); License Agreement between [redacted] (AMZN_Remand_00008642, COEX-7.24).

[109] "Here are the main differences between Amazon's two music streaming services, Prime Music and Amazon Music Unlimited," Business Insider, at https://www.businessinsider.com/guides/prime-music-vs-amazon-music-unlimited.

[110] Amended Expert Witness Statement of Dr. Gregory K. Leonard, Phonorecords III, at 39-41.

[111] For example, having determined that the percentage of revenue rates for licensing sound recording rights from his selected [redacted] *See* Eisenach WDT, Table 3, ¶ 86.

[112] Eisenach WDT ¶¶ 9, 84.

56. However, the Judges did not adopt the 2.5:1 ratio without adjustment. Rather, the Judges explicitly recognized that applying the 2.5:1 ratio to existing sound recording royalty rates would be inappropriate because those existing rates are above the competitive level due to the labels' complementary oligopoly power.[113] The Judges found that the labels have such power.[114] Accordingly, the Judges adjusted the ratio upward to 3.82:1 before applying it to existing sound recording royalty rates when calculating the musical works rate and TCC percentage.[115] Thus, Dr. Eisenach erred by using the 2.5:1 ratio rather than the adjusted 3.82:1 ratio that the Judges actually applied to existing sound recording rates.

57. The basic problem is that the 2.5:1 ratio is based on the Shapley Values of the labels and publishers, but in the real world the labels have received more than their Shapley Values due to their complementary oligopoly power.[116] If one were to ignore this divergence between the Shapley model and the real world and use the unadjusted 2.5:1 ratio, the result would be to give the musical works Copyright Owners more than their Shapley Values. For example, suppose hypothetically that a Shapley model suggests that [redacted] (so that the latter two revenue shares are consistent with the 2.5:1 ratio), while in the (hypothetical) real world the sound recording royalty rate was [redacted], well above the revenue share suggested by the Shapley model, and musical works royalty rate was [redacted]. If one were to apply Dr. Eisenach's 2.5:1 ratio to the [redacted] hypothetical real-world combined royalty rate, the result would be a musical works rate of [redacted], which is above the hypothetical's Shapley Value-based

[113] 84 Fed. Reg. at 1951.
[114] *Id.* at 1964.
[115] Phonorecords III, Final Determination, at 75.
[116] For the purposes of this section, I put aside the flaws in the Shapley Value models put forward by Drs. Gans and Watt. I discuss those flaws below and why the Shapley Value models do not provide appropriate musical works rates.

musical works rate of [redacted]. In other words, the failure to adjust the 2.5:1 rate would result in a musical works royalty that was too high.

58. In conclusion, Dr. Eisenach wrongly applies the 2.5:1 ratio to the existing sound recording rates from his Label Interactive Deals to get a range of musical works rates. If instead, one were to apply the 3.82:1 ratio that the Judges actually adopted to the sound recording rates of [redacted] from Dr. Eisenach's Label Interactive Deals, one would obtain all-in musical works percentage of revenue rates of [redacted] the 20% rate in the Copyright Owners' Proposed Rates, and includes the *Phono III* pre-remand headline rate of 15.1% for 2022. Applying the same methodology to adjust the per-subscriber rates from Dr. Eisenach's Label Interactive Deals of [redacted] and the $1.50 per subscriber per month rate in the Copyright Owners' Proposed Rates. Applying the same methodology to adjust the per-play rates from Dr. Eisenach's Label Interactive Deals (excluding ad-supported rates) of [redacted] and the $0.0015 per play rate in the Copyright Owners' Proposed Rates.

59. In addition to the 2.5:1 ratio that he mistakenly asserts that the Judges adopted, Dr. Eisenach also performs his benchmark calculations using the 1.36:1 ratio that emerges from the Shapley Value model that Dr. Watt has put forward in this proceeding.[120] Dr. Watt's

[117] 52%/3.82=13.6% and 58%/3.82=15.2%.
[118] Appendix D1.
[119] Appendix D1.
[120] Eisenach WDT ¶¶ 84, 86-87; Watt WDT ¶141.

Shapley Value model is substantially flawed and unreliable as discussed below. Even putting aside the flaws in the model that produced the 1.36:1 ratio, Dr. Eisenach commits the same error as he did with the 2.5:1 ratio. Like the 2.5:1 ratio, the 1.36:1 ratio is based on the labels' and publishers' Shapley Values (as output by Dr. Watt's model). However, the labels receive more in sound recording royalties than their Shapley Values due to their complementary oligopoly power. Dr. Watt vigorously asserts that his Shapley Values do not incorporate any label complementary oligopoly power. Yet, the Judges have found that the labels do, in fact, have such power. Thus, applying the 1.36:1 ratio to the labels' existing sound recording rates (which are above their Shapley Values) results in the publishers receiving more than their Shapley Values as well.

4. Dr. Eisenach's Benchmark Mechanical Per-Subscriber and Per-Play Rates are Inconsistent with His Calculation of the Actual Public Performance Per-Subscriber and Per-Pay Rates

60. As discussed above, based on royalty payments data, Dr. Eisenach calculates a public performance per-subscriber rate across all interactive music streaming services of [redacted]. In contrast, based on his purported benchmark analysis, Dr. Eisenach calculates mechanical per-subscriber rates ranging from [redacted] per subscriber based on the 2.5:1 sound recording to musical works ratio and [redacted] per subscriber based on the 1.36:1 sound recording to musical works ratio. Thus, Dr. Eisenach's benchmark calculations result in a mechanical per-subscriber rate that is [redacted] the actual per-subscriber rates paid for public performance rights.

61. The large divergence between what Dr. Eisenach claims the mechanical rates should be and the public performance rates that are actually paid indicates that Dr. Eisenach's benchmark analysis is flawed. In contrast to the results of Dr. Eisenach's benchmark analysis,

there are several reasons why public performance royalties can be used as a benchmark for the mechanical royalties under the effective competition WBWS standard. First, I understand that, as a matter of law, when a musical work is embodied in a sound recording streamed on an interactive music service, both a performance right and a mechanical right are implicated. However, from an economics point of view, these two rights are "perfect complements."[121] A service may stream a musical work only if licensed under both rights for that musical work, and the two rights are "symmetric"—nothing is provided by one that is not provided by the other. In this situation, it is natural to divide the overall royalty for both rights evenly between the two rights. For example, the natural way to divide the all-in rate for musical works between the public performance and mechanical rights is to assign each 50%. Second, the public performance royalty for interactive music streaming is not governed by Section 115 or any other statute (although ASCAP and BMI are subject to an antitrust decree, which is designed to achieve competitive outcomes). Rather, the interactive music streaming services negotiate license agreements for public performance rights with each of the PROs in a WBWS setting. Each PRO licenses the musical works of its members or affiliates. Virtually all streams of musical works are licensed with one of the four PROs—ASCAP, BMI, SESAC, and GMR.[122] Third, the PRO agreements are comparable to the hypothetical Section 115 license at issue here in many respects. The PROs represent the musical work copyright owners (and songwriters), and thus are similarly situated to the music publishers that would be negotiating the hypothetical Section 115 license. The licensees in both cases are the same interactive music streaming service providers, and the service being licensed is also the same. As noted above, the rights being

[121] 84 Fed. Reg. at 1918, 1934, 1997.

[122] Exceptions are musical works in the public domain and a small number of musical works licensed by entities other than the PROs.

licensed are effectively the same given the perfect complementarity and symmetry. As a result, because the PROs negotiate freely with the interactive music streaming service providers, and given that one would expect the royalties for the musical works mechanical and public performance rights to be approximately equal given the symmetry and perfect complementarity of these rights, the performance royalties for interactive music streaming can serve as a benchmark for the mechanical royalties for interactive music streaming. Therefore, the public performance per-subscriber rate of [redacted] calculated by Dr. Eisenach could be used as a benchmark for the mechanical per-subscriber rate in this proceeding–i.e., the mechanical per-subscriber rate should also be [redacted].

62. The inconsistency between Dr. Eisenach's public performance per-subscriber rate of [redacted] and his benchmark range of mechanical per-subscriber rates is due in part to his incorrect use of the 2.5:1 and 1.36:1 sound recording to musical works ratios. As discussed in the previous section, using the ratio of 3.82:1 that the Judges actually adopted in *Phono III*, and deducting public performance royalties of [redacted] per subscriber, would lower Dr. Eisenach's range of mechanical per-subscriber rates to [redacted] per subscriber, [redacted].[123] Furthermore, if one were to set both the public performance and mechanical musical works rates equal to [redacted] per subscriber, implement Dr. Eisenach's benchmarking approach, and then solve for the corresponding sound recording to musical works ratio, the following ratios would result:[124]

- [redacted]
-

[123] For the reasons discussed elsewhere in this report, in my opinion, the [redacted] range for the per subscriber mechanical minimum is still too high. Appendix D1.
[124] Appendix D2.

These sound recording to musical works ratios are substantially above Dr. Eisenach's 2.5:1 and 1.36:1 ratios, which further demonstrates that Dr. Eisenach's ratios are too low.

63. As also discussed above, Dr. Eisenach calculates public performance per-play rates for each service and offering type included in his benchmarking analysis, and specifically uses [redacted], respectively. These public performance per-play rates diverge substantially from his calculation of benchmark mechanical per-play rates ranging from [redacted] per play based on the [redacted]. However, as discussed above, given that public performance and mechanical musical works rights are perfect complements,[125] the large divergence between what Dr. Eisenach claims the mechanical rates should be and the public performance rates that are actually paid indicates that Dr. Eisenach's benchmark analysis is flawed. Furthermore, given that public performance royalties are determined via negotiation (subject to the antitrust consent decree) under agreements comparable to the Section 115 license for several important reasons, they can be used as a benchmark for the mechanical royalties under the effective competition WBWS standard. For the reasons discussed elsewhere in this report, per-play rates are [redacted] and should not be adopted under a WBWS standard in this proceeding. However, even under Dr. Eisenach's view, the public performance per-play rates of [redacted] per-play would suggest a range substantially [redacted].

64. The inconsistency between Dr. Eisenach's public performance per-play rate range of [redacted] per-play and his benchmark range of mechanical per-play rates is due in

[125] *See* 84 Fed. Reg. at 1918, 1934, 1997.

part to his inappropriate use of the 2.5:1 and 1.36:1 sound recording to musical works ratios. As discussed in the previous section, using a more appropriate ratio of 3.82:1 and deducting actual public performance royalties, would lower Dr. Eisenach's range of mechanical per-play rates to [redacted] per play, [redacted] per play rate in the Copyright Owners' Proposed Rates.[126] Furthermore, if one were to set both the public performance and mechanical musical works rates equal to [redacted] per play, implement Dr. Eisenach's benchmarking approach, and then solve for the corresponding sound recording to musical works ratio, the following ratios would result:[127]

- [redacted]
- [redacted]

These sound recording to musical works ratios are substantially above Dr. Eisenach's 2.5:1 and 1.36:1 ratios, which further supports the conclusion that Dr. Eisenach's ratios are too low.

5. The Economic Effects of the Copyright Owners' Proposed Rates Are Unreasonable

65. Using data from [redacted] Dr. Eisenach calculates the musical works and combined (musical works plus sound recording) royalties for these services over the 12-month period from June 2020 to May 2021 under both the *Phono III* rates as of 2022 and Copyright Owners' Proposed Rates.[128,129]

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[126] Appendix D1.

[127] Appendix D2.

[128] Eisenach WDT, Table 4, ¶¶ 119-120.

[129] Dr. Eisenach adjusts [redacted] based on what he apparently perceives to be reporting anomalies or mistakes in Google's MLC data. Eisenach WDT, Appendix C, ¶¶ 19-22. Dr. Eisenach's adjustments stem from the following two perceived issues in Google's MLC data:

- [redacted]
- [redacted]

(While Dr. Eisenach does not actually explain the specific issues in Google's MLC data that caused him to make his adjustments to Google's data, based on his description of the adjustments, these are the two perceived data issues

Dr. Eisenach also calculated the musical works and combined royalties as a percentage of revenue for these services over the same time period and under the two sets of rates.[130] The results of his calculation demonstrate the unreasonable nature of the Copyright Owners' Proposed Rates, generating an increase in musical works and combined royalties that is unsupported by the economic evidence in this case.

66. Based on the analysis in Dr. Eisenach's Table 4, [redacted][132] These percentage

that he appears to be addressing with his adjustments.) However, as explained in my Third Supplemental Written Remand Testimony, dated February 24, 2022, [redacted] Third Supplemental Written Remand Testimony of Dr. Gregory K. Leonard, February 24, 2022, ¶ 11. Google was simply conforming to the statutory structure. In addition, [redacted] Higginson WRT ¶ 17.

[130] Eisenach WDT, Table 5, ¶¶ 121-122.

[131] Eisenach WDT, Table 4.

[132] Eisenach WDT, Table 4. These calculations assume a zero "see-saw" effect, which is consistent with the empirical evidence that shows that, despite higher musical works royalties following the *Phonorecords III* Initial Determination in 2018, [redacted] *See* Written Direct Remand Testimony of Waleed Diab, Phonorecords III (Remand), at ¶¶ 9-11. In the *Phono III* Remand proceeding, Dr. Watt and Dr. Eisenach claim to have found evidence of the so-called "see saw effect" in data [redacted] *See* Remand Written Rebuttal Testimony of Jeffrey A.

increases in dollar royalties under the Copyright Owners' Proposed Rates, especially for musical works royalties, are without support in the economic evidence.

67. From a percentage of revenue perspective, the results further demonstrate the unreasonable nature of the Copyright Owners' Proposed Rates. Specifically, based on the analysis in Dr. Eisenach's Table 5, the impact of the Copyright Owners' Proposed Rates versus the *Phono III* rates would be to [redacted][133] This dramatic increase in musical works royalties as a percentage of revenue correspondingly increases combined royalties (for both sound recordings and musical works) as a percentage of revenue to unsustainable levels from the perspective of the interactive music streaming services. The impact of the Copyright Owners' Proposed Rates versus the *Phono III* rates would be to [redacted]

Eisenach, Ph.D., Phonorecords III (Remand), at ¶¶ 25-27. Dr. Watt and Dr. Eisenach each conclude that this supposed [redacted] *See* Watt WDRRT ¶¶ 41-45 (referencing Eisenach's analyses of royalty data as support for the see saw theory); Eisenach WDRRT ¶ 9 (characterizing his analysis as pertaining to the "impact" of Phono III on royalties), ¶¶ 24-27 (containing analyses specific to Google).) However, as discussed in my Written Supplemental Remand Testimony, these claims are incorrect both because they confuse correlation and causation, and because Dr. Eisenach made calculation errors, selectively used data from a specific time period, and inappropriately aggregated his calculation across services. In fact, Google's royalty payment data do not provide support for the existence of a "see saw effect." *See* Written Supplemental Remand Testimony of Dr. Gregory K. Leonard, Phonorecords III (Remand), at ¶¶ 6-20.

[133] Eisenach WDT, Table 5.

[redacted][134] At the Copyright Owners' Proposed Rates the interactive music streaming services would be paying out an economically unsustainable share of their revenues to musical works and sound recording rights holders and their agents leaving them with not enough revenues to cover their costs.[135] Furthermore, I note that these combined royalty rates for Google [redacted][136]

68. In Dr. Eisenach's Table 6 he calculates that Google's mechanical royalties would decrease by [redacted], respectively, if the per-play prong was removed from the Copyright Owners' Proposed Rates.[137] For all of the services mechanical royalties would decrease by [redacted] respectively, if the per-play prong was removed from the Copyright Owners' Proposed Rates.[138] Dr. Eisenach concludes that "removing the per-play prong would have very little impact on subscription services…The effect on ad-supported services is more significant."[139] He further goes on to conclude that services such as Pandora and Google "are able to exploit the existing structure through intense utilization of Copyright Owners' rights in ways that generate relatively little in the way of cognizable value

[134] Eisenach WDT, Table 5. Again, I assume a zero "see-saw" effect, consistent with the empirical evidence.
[135] Second Supplemental Written Remand Testimony of Dr. Gregory K. Leonard,Phonorecords III (Remand), at ¶¶ 16-21.
[136] *Phono III* (Remand), Additional Written Direct Testimony of Richard Watt, Ph.D, ¶ 42; *Phono III* (Remand), Additional Written Testimony of Jeffrey A. Eisenach, ¶ 31.
[137] Eisenach WDT, Table 6. In other words, Dr. Eisenach calculates and compares Google's mechanical royalties under the Copyright Owners' Proposed Rates with the per-play prong and the Proposed Rates without the per-play prong.
[138] Eisenach WDT, Table 6.
[139] Eisenach WDT ¶ 125.

(in the form of declared revenues), and thus pay relatively little in royalties" and that the "adoption of the per-play prong would thus result in a more level – i.e., business model neutral – competitive playing field."[140] Dr. Eisenach's conclusions regarding this per-play prong analysis are incorrect as a matter of economics for several reasons.

69. First, he does not explain how a [redacted] decrease in Google's mechanical royalties for its subscription service from removing the per-play prong from the Copyright Owners' Proposed Rates—or put another way, a [redacted] increase in Google's mechanical royalties for its subscription service from including the per-play prong in the Copyright Owners' Proposed Rates—would have "very little impact." Dr. Eisenach performs no statistical analysis to establish the significance of such an impact, but rather simply states his unsupported opinion that such an impact is "very little." This is not an economically sound analysis. Second, for the "more significant" effect on ad-supported services (i.e., [redacted], Dr. Eisenach provides absolutely no support for his conclusion that services such as Google "exploit" the current *Phono III* rates by "intense utilization" of mechanical musical works rights and generate "relatively little" in revenues. Dr. Eisenach's statement is mere conjecture and hyperbole that is not supported by any facts or evidence. In fact, ad-supported services are typically targeted at users with lower WTP for music. Thus, contrary to Dr. Eisenach's claim, the "utilization" of mechanical musical works rights is actually less "intense" for ad-supported services than for subscription services. As a result, it is entirely reasonable from an economics point of view that ad-supported services generate "relatively [less]" in royalties than subscription services. Third, because of the difference in user WTP for music between subscription and ad-supported services, the imposition of the same per-play royalty

[140] Eisenach WDT ¶ 126.

prong on both services would result in a less level competitive playing field, with ad-supported services at a competitive disadvantage. Dr. Eisenach has it completely backwards.

70. In Dr. Eisenach's Table 7, he calculates that for [redacted] if subscriber discounts for family and student plans remained in the Copyright Owners' Proposed Rates.[141] Dr. Eisenach does not include Google in this analysis because, according to him, Google did not provide sufficient data to perform the calculation.[142] Dr. Eisenach concludes that "retaining family and student discount plans would have a significant overall impact on subscriber counts" and the "impact on mechanical royalty payments (15.5 percent) is smaller."[143] He further concludes that family and student plan subscriber discounts are "not business model neutral" and "force publishers to subsidize the price discrimination schemes of the services."[144] Dr. Eisenach's conclusions regarding the family and student plan subscriber discounts are incorrect for several reasons.

71. First, similar to his per-play prong analysis, he does not explain how a [redacted] decrease in subscribers from keeping the family and student plan subscriber discounts is "significant;" and he performs no statistical analysis to establish the significance of such an impact. Second, Dr. Eisenach ignores the overwhelming evidence in the record that family and student plan subscriber discounts have been [redacted] For example, [redacted]

[141] Eisenach WDT, Table 7. In other words, Dr. Eisenach calculates and compares these services subscribers and mechanical royalties under the Copyright Owners' Proposed Rates without the student and family plan subscriber discounts and the Proposed Rates with these subscriber discounts.
[142] Eisenach WDT, Table 7.
[143] Eisenach WDT ¶ 129.
[144] Eisenach WDT ¶ 130.

[redacted] The economic reason is that the value of the use of the intellectual property is less with a lower WTP customer and thus the intellectual property owner should receive less (as does the supplier of the product or service). Of course, the reason for a service provider to "price discriminate" is to increase overall revenue, an outcome that benefits the intellectual property rights owner as well. Thus, Dr. Eisenach again misunderstands the economics: music publishers are not "subsidizing" services' price discrimination; they are in effect engaging in price discrimination themselves (by charging a lower royalty for lower WTP users) and benefiting from the resulting expansion in revenues.

72. Finally, in Dr. Eisenach's Table 8 he calculates the TCC-based musical works royalty in the Copyright Owners' Proposed Rates of 40% multiplied by the TCC (based on Dr. Eisenach's assumed 2.5:1 sound recording to musical works royalty ratio); divides this figure by subscribers and plays to get [redacted]

[145] *See* Corrected Google WDS, Google Exs. 13, 14, 16; COEX-2.16.

[146] COEX-7.28 at 38-39; COEX-7.25 at 58-65; COEX-7.26 at 48-50. Google's agreement with [redacted] *See* Google Reb. Ex. 02 (GOOG-PHONOIV-00003817-931).

[redacted][147] Dr. Eisenach concludes that these implied per-subscriber and per-play rates are [redacted] and therefore, the "rates Copyright Owners propose for each of the three prongs are well-calibrated, internally consistent and economically reasonable."[148]

73. If instead, one were to use the 3.82:1 sound recording to musical works ratio that the Judges in the *Phono III* proceeding actually adopted in Dr. Eisenach's analysis presented in his Table 8, then the results for the implied per-subscriber and per-play rates are [redacted] in the Copyright Owners' Proposed Rates. Specifically, updating Dr. Eisenach's analysis in his Table 8 using the more appropriate 3.82:1 sound recording to musical works ratio would generate implied per-subscriber and per-play mechanical rates of [redacted]. These figures are inconsistent with and well below the [redacted] in the Copyright Owners' Proposed Rates. Further, as noted above, per play rates are not supported by benchmark agreements in this case.

[147] Eisenach WDT, Table 8.
[148] Eisenach WDT ¶ 132.

C. Dr. Eisenach's Reliance on Blanket Licenses for Audio-Visual Streaming Is Misplaced

1. Overview of Dr. Eisenach's Benchmark Analysis Based on Blanket Licenses for Audio-Visual Streaming

74. Dr. Eisenach relies on blanket licenses covering licenses to musical works for audio-visual ("AV") streaming services to support his claim that a [redacted] is appropriate and that the 2.5:1 ratio is too high.[149] Specifically, his benchmark agreements [redacted][150] Dr. Eisenach finds that in each of these agreements there are [redacted][151] Dr. Eisenach asserts that these blanket licenses covering AV streaming services are comparable to the Section 115 license. He acknowledges that AV "synch" licenses were determined to not be relevant in prior proceedings, but states that these blanket licenses are different and, in fact, relevant.

> By contrast, the benchmark agreements I am considering in this circumstance involve use cases that require blanket licenses for entire catalogues – that is, they involve digital music platforms which seek blanket licenses in order to allow their users to select from within the entire catalog, just as do Spotify and other interactive streaming services. From an economic perspective, the fact that the use case is different (including that it incorporates an audio-visual component) may impact the total value of the bargain, but there is no reason to believe that it would affect the relative value of sound recording rights and musical work rights, which are perfect complements to these services just as they are in the case of interactive services. The only meaningful difference is that, largely as an artifact of history, the musical works are not covered by the Section 115 compulsory license. Thus, these agreements constitute a natural experiment – a market in

[149] Eisenach WDT ¶ 110.
[150] Eisenach WDT ¶ 109, fn. 119.
[151] Eisenach WDT ¶¶ 109-110, fns. 119-120.

which sound recording agreements and musical works agreements are both voluntarily negotiated between willing buyers and willing sellers.[152]

2. The Blanket Licenses for AV Streaming Are Not Comparable to the Section 115 License and Do Not Support a [redacted] for Interactive Streaming

75. The [redacted] is well below all the other sound recording to musical works ratios that have been discussed in these proceedings, including the 3.82:1 from the *Phono III* Final Determination, the 2.5:1 from the Shapley-inspired model Dr. Gans put forward in *Phono III*, and the 1.36:1 from the Shapley Value model Dr. Watt has put forward in this proceeding, let alone the [redacted][153] and the [redacted] discussed above. In short, the blanket AV streaming licenses "prove too much." There must be significant economic differences between the blanket AV streaming licenses and the Section 115 license that explain why [redacted] However, these same economic differences render the blanket AV streaming licenses inappropriate as benchmarks for the Section 115 license.[154]

76. With regard to the blanket AV streaming licenses with fitness companies such as [redacted], an important economic difference is that the fitness companies are not providing an

[152] Eisenach WDT ¶ 108.

[153] [redacted]

[154] Moreover, I note that the [redacted]. *See* COEX-5.24 and COEX-5.27. The potential that litigation-related considerations may have affected the negotiations, rendering the agreement unreliable as a benchmark for the value of the underlying intellectual property has been recognized by the U.S. Court of Appeals for the Federal Circuit. *LaserDynamics, Inc. v. Quanta Computer, Inc.*, 694 F.3d 51, 77 (Fed. Cir. 2012).

interactive music streaming service.[155] In fact, the [redacted] specifically states that it would not cover [redacted][156] Another important economic difference is that the fitness companies have a greater ability to substitute among labels than do the interactive music streaming services. For example, because it is not [redacted] a fitness company could choose to forego the sound recordings of a major label.[157] That is, the major labels are not each "must have." Accordingly, a fitness company could leverage the ability to substitute among labels to negotiate lower sound recording royalties. The same is not necessarily true on the publishing side, however, due to fractional ownership. While a license with a single major label would provide the complete sound recording rights to a large catalog of sound recordings to a fitness company, a single publisher may have 100% ownership of only a small fraction of the songs in which it has some ownership interest. This means that a license from multiple publishers would be required for a fitness company to be able to use the sound recordings of even a single label. With the greater substitution possibilities on the sound recording side (relative to the publishing side) for fitness companies than is the case for interactive music streaming services, the sound recording to musical works ratio would be expected to be lower for fitness companies than for interactive music streaming services.

77. With regard to the blanket AV streaming licenses with social media companies including [redacted] again substantial economic differences exist between these services

[155] COEX-2.28. The [redacted] P4-SMP00000755. [redacted] P4-UMPG00002052.

[156] COEX-2.28 at P4-SMP00000751 ([redacted]).

[157] This is underscored by [redacted] COEX-5.25 at P4-UMPG00002067-68.

and the interactive music streaming services at issue in this case. First, in contrast to interactive music streaming, TikTok is widely recognized as having important promotional effects for sound recordings.[158] A sound recording included in a user-created TikTok video may get exposure to a wide audience.[159] At the same time, TikTok videos are typically of short duration (as little as 15 seconds).[160] Thus, use of a sound recording in a TikTok video can generate consumer demand for [redacted][161] Second, TikTok is afforded protection from claims of copyright infringement by its users under the DMCA and can avoid infringement by removing videos in response to a valid takedown notice. This is more likely to be a viable option for a pure video service that does not seek to provide an interactive music streaming service (as YouTube does).[162] Third, although TikTok has chosen to offer its users a music library of licensed music, this library need not contain the catalogs of all major labels and full-

[158] Dan Whateley, " How TikTok is changing the music industry," *Business Insider*, January 3, 2022, https://www.businessinsider.com/how-tiktok-is-changing-the-music-industry-marketing-discovery-2021-7#:~:text=TikTok%20is%20an%20essential%20promotional,generated%20posts%20from%20their%20fans; Elias Leight, "You Have a TikTok Hit! Now, Quick — Change the Title," *RollingStone Australia*, April 20, 2020, https://au.rollingstone.com/music/music-features/tik-tok-hits-changing-titles-9850/; Ethan Millman, "The Biggest Old Music Hits Resurfaced by TikTok," *RollingStone*, November 6, 2020, ttps://www.rollingstone.com/pro/features/tiktok-old-hits-fleetwood-mac-jack-johnson-aly-aj-1086232/; Ethan Millman, "Inside TikTok's Hidden Hit Machine," RollingStone, August 26, 2020, https://www.rollingstone.com/pro/features/tiktok-music-industry-hits-1043154/. The use of sound recordings in the fitness companies' services also appear to be viewed as promotional. The Barry's Bootcamp agreement allows Barry's to include an "upsell" link to an interactive streaming service through which a user can add sound recordings to playlists on the interactive streaming service. P4-UMPG00002060.

[159] "New studies quantify TikTok's growing impact on culture and music," TikTok, July 21, 2021, https://newsroom.tiktok.com/en-us/new-studies-quantify-tiktoks-growing-impact-on-culture-and-music (reporting on a study that found that 75% of TikTok users say they discover new artists through TikTok and 63% of TikTok users heard new music that they have never heard before on TikTok).

[160] When TikTok first launched in 2016, the maximum video length was 15 seconds. At the time the agreement was entered into (June 25, 2020), the maximum video length on TikTok was 60 seconds. *See* John Awa-Abuon, "Are 10-Minute Videos Too Long for TikTok?," March 3, 2022, https://www.makeuseof.com/10-minute-videos-tiktok-too-long/#:~:text=When%20TikTok%20first%20launched%20in,video%20length%20to%20three%20minutes.

[161] [redacted] *See* COEX-5.23 at P4-UMPG00002009.

[162] Higginson WRT ¶¶ 22-23.

length versions of licensed sound recordings because TikTok is not offering an on-demand music streaming service. Thus, TikTok has a greater ability to substitute among labels than does an interactive music streaming service. Fourth, Dr. Eisenach ignores the implications of the royalty structure of the [redacted]. [redacted].[163] [redacted].[164] This would be analogous to the 10.5% of revenue all-in royalty for interactive music streaming [redacted].[165]

[163] COEX-2.26, COEX-5.23, COEX-5.24. [redacted]

[164] COEX-5.24.

[165] The [redacted]. Copyright Owners' experts give no justification for picking and choosing which aspects of the blanket AV licenses they adopt as benchmarks and which they ignore.

78. Additionally, Dr. Eisenach and the Copyright Owners fail to [redacted]. [166] TikTok's worldwide ad revenues were $2.1 billion in 2021.[167] Assuming performance royalties equaled mechanical royalties, [redacted]. [168] [redacted]. That the [redacted] TikTok's origins as a lip synch video app and the fact that the biggest "viral" TikTok videos have had music.[169] Thus, if Dr. Eisenach and the Copyright Owners [redacted].

79. Finally, Dr. Eisenach's benchmark analysis based on the blanket AV streaming licenses leads to nonsensical results. Given that sound recording royalty rates for interactive music streaming already exceed 50%, setting the musical works royalty rate using a [redacted]

[166] COEX-5.24 at P4-UMPG00001867. [redacted] COEX-5.24 at P4-UMPG00001863.

[167] "TikTok net advertising revenue in the United States from 2021 to 2024," Statista, https://www.statista.com/statistics/1302319/tiktok-ad-revenue-us/#:~:text=The%20net%20advertising%20revenue%20of,estimated%2011.01%20billion%20in%202024.

[168] The [redacted] *See* COEX-5.24 at P4-UMPG00001867. [redacted]

[169] "Year on TikTok: 2021-of-a-kind," TokTok, December 6, 2021, https://newsroom.tiktok.com/en-us/year-on-tiktok-2021-us. (Where 6 out of 10 of the "top videos" from 2021 featured music.) Rebecca Jennings, "TikTok, explained," July 12, 2019, *Vox*, https://www.vox.com/culture/2018/12/10/18129126/tiktok-app-musically-meme-cringe.

would result in a combined sound recording and musical works royalty rate that exceeds 100%. Alternatively, one could start with a "survival rate" for the services and then set the musical works royalty to be equal to half of the remaining revenue share (for example, with a "survival rate" of [redacted]). But, this approach would work only with a see-saw effect of approximately 100%. Otherwise, the services would be left with less than their "survival rate."[170] As discussed in my *Phono III* remand testimony, the economic evidence supports a see-saw effect of zero rather than 100%.[171] With a zero see-saw effect, the services would be left with [redacted], which is not sustainable.[172]

D. Dr. Eisenach Inappropriately Assigns Value to the Copyright Owners' Music Catalogs that Is, In Fact, Attributable to Other Factors

80. According to Dr. Eisenach, the "fair market value of licenses to stream music has been increasing for many years as a result of changes in markets and technologies," including (1) "widespread deployment of 4G (and now 5G) mobile broadband networks," (2) "nearly ubiquitous penetration of smartphones," (3) "integration of mobile wireless devices with automobile audio systems," and (4) "widespread adoption of smart televisions, connected home audio systems and smart speakers."[173] But it is inappropriate to assign all of the value that reflects synergies across numerous factors, including these technological factors, investments by service providers, and potentially the Copyright Owners' music catalogs, solely to the Copyright

[170] For example, [redacted] As discussed elsewhere in this report, there is no evidence to support a 100% see-saw effect. *See* Eisenach WDT, Table 3 and Eisenach Phono III Remand WRT, Table C-1.

[171] Leonard Phono III Remand WSRT ¶22.

[172] Second Supplemental Written Remand Testimony of Dr. Gregory K. Leonard, Phonorecords III (Remand), at ¶ 17.

[173] Eisenach WDT ¶ 59.

Owners' music catalogs or licenses to interactively stream such catalogs. To the extent that Dr. Eisenach is, in fact, doing this he is inappropriately assigning the portion of the value created by these technologies to the Copyright Owners' music catalogs to inflate his determination of the appropriate rates in this proceeding.

E. Copyright Owners' Experts' Claims That Interactive Music Streaming Drives Other Revenue Streams for the Services Have No Empirical Support and Are Incorrect

81. According to Dr. Eisenach:

> [T]he value generated by a music catalog is measured by its ability to attract, maintain and intensify customer engagement for the Platform overall, not by the revenues or margins earned by the streaming product, which the Platform deploys for a larger purpose. Thus, the Platforms rationally chose to underprice their interactive streaming products in furtherance of their function as a customer acquisition tool and, as a result, the revenues earned by the streaming product directly do not fully reflect the value generated by the catalog licenses that are the subject of this proceeding.[174]

Thus, Dr. Eisenach claims that the Copyright Owners' musical works catalogs are valuable for their ability to attract customers (and customer engagement) to the "platforms" of the services, the services deliberately underprice their interactive music streaming offerings to attract these customers (and customer engagement), and, therefore, the revenues earned from these interactive music streaming offerings do not fully reflect the value of the Copyright Owners' musical works catalogs to the services.[175]

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[174] Eisenach WDT ¶ 60.

[175] In Dr. Eisenach's own words: "The Platforms' incentives to underprice their music streaming offerings extend to 'free' and 'ad-supported' services, which serve as a mechanism for customer acquisition and, just like their paid services, contribute to growing the cumulative customer lifetime values of each Platform. Thus, when Platforms engage in 'price discrimination,' they are not doing so to maximize total streaming revenues by targeting low willingness to pay customers but rather to attract customers with high customer lifetime values -- and not lifetime values for just their streaming services, which account for a tiny percentage of their overall businesses, but for the other, larger products and services that drive their businesses." Eisenach WDT ¶ 64.

82. Dr. Eisenach fails to support any of these assertions with sound evidence or economic analysis. For example, he fails to even recognize the potential for "reverse causality" where a "platform's" other products and services drive customers (and customer engagement) to the service's interactive music streaming product, rather than the other way around. Before it ever began offering interactive music streaming, Google had already established a number of successful and widely used products and services, such as search and the Android operating system. It is more plausible that the existence of these pre-existing Google products and services had a positive causal effect on Google's interactive music streaming service than the other way around. Yet, Dr. Eisenach never even considers this potential reverse causality.

83. Google tracks how many paying subscribers it converts from the inclusion of a free trial on its Google devices such as Google Home and Pixel. [redacted].[176] The potential for reverse causality is also illustrated by the impact of Apple's iOS device ownership on interactive music streaming subscriber growth. The conversion rate of free trial subscribers to paying subscribers is 2.5 times greater for Apple Music than Spotify due to consumers valuing integrated experiences with ownership of Apple iOS devices.[177]

84. As for Dr. Eisenach's claim that the services deliberately underprice their interactive music streaming offerings to attract customers, the only evidence that Dr. Eisenach

[176] *See* Google Reb. Ex. 03 (GOOG-PHONOIV-00005401).

[177] "Apple Music in Stride Amid Company's Shift to Bundling," Loup funds, https://loupfunds.com/apple-music-in-stride-amid-companys-shift-to-bundling/; "Apple Music is Converting Paid Users 2.5x Faster Than Spotify, Analyst Calculates," Digital Music News, https://www.digitalmusicnews.com/2020/09/08/apple-music-conversion-rate/.

presents (citing to the Flynn WDT) is that the combined total revenues (across all products and services) of the Big Three—Amazon, Apple, and Google—[redacted] but combined revenues for their interactive music streaming services [redacted][178] Then, Dr. Eisenach simply concludes, again without any evidence regarding causality: "Yet music is a central part of the customer engagement that drives these companies."[179] But, this "calculation" is meaningless and does not establish that the services are underpricing their interactive music streaming offerings to attract customers to their other offerings, or that the services are not attributing enough revenues and profits to their interactive music streaming offerings versus other offerings on their platforms. Dr. Eisenach has done nothing to address the important question of causality—does the existence of the interactive music streaming service *cause* the revenues of the other offerings to be higher than they would otherwise be?

85. Dr. Eisenach's argument also ignores [redacted], which according to his own analysis account for [redacted], respectively, despite not having "platforms" like those of Amazon, Apple, and Google. Google, in comparison to Spotify,

[178] Eisenach WDT ¶ 63.

[179] Eisenach WDT ¶ 63. To apparently support this conclusory statement, Dr. Eisenach performs the following analysis: "The total streams of music served by these companies in May 2021 (the latest month for which I have data) adds up to [redacted] hours of customer engagement (using an average of three minutes per stream), assuming that only one customer at a time is listening to the music. To put this in perspective, that is the equivalent of six and one half hours of time for every person in the United States. The collective national engagement on just these music products covered by the rates set in this proceeding thus amounts to a material percentage of the aggregate waking life of the entire national population." Eisenach WDT ¶ 63. Dr. Eisenach does not provide any analysis as to what makes this a "material" percentage of the "waking life" of the national population. For example, Dr. Eisenach neglects to explicitly specify that these [redacted] In addition, using Census data, approximately 61.2% of the total US population are between ages 18-65, which only increases the daily time to 19 minutes, hardly a "material percentage of the aggregate waking life" contrary to what Dr. Eisenach claims. Assuming people sleep 8 hours per night, this 19 minutes amounts to less than 2% of "waking life." If one were to further consider that a non-zero number of songs streamed are played as background noise, left on by accident, etc., this figure becomes even more insignificant.

accounts for [redacted][180] Additionally, Apple and Google price their subscription interactive music streaming services at the same price of $9.99 as Spotify.[181] If Dr. Eisenach's assertion that "platforms" such as Apple and Google deliberately underprice their subscription interactive music streaming offerings to attract customers to their other offerings is correct, then one would expect to see Apple and Google pricing their subscription interactive music streaming offerings below Spotify's (and the industry's) $9.99 standard price. But this is not the case.

86. Later in his report, Dr. Eisenach also references Ms. Flynn's calculation of supposedly complementary revenues attributable to Amazon's, Apple's, Google's, and Spotify's interactive music streaming services.[182] Before presenting the results of these calculations, Dr. Eisenach makes it clear that the calculations themselves cannot be performed with precision:

> While I cannot calculate with precision the revenues from the licensed activity that are captured by the Platforms outside of the streaming product itself, the available evidence does provide a basis for assessing the magnitude of their complementary offerings relative to their music streaming businesses and establishing that the complementary value they are receiving is economically significant compared with the level of music royalties they are paying.[183]

With respect to Google, Ms. Flynn estimates that Google's U.S. complementary revenues were $78.5 billion in 2020.[184] This figure is calculated as follows:

- $10.1 billion, which is equal to Alphabet's "Google other" revenues in 2020 of $21.7 billion multiplied by Google's assumed U.S. percentage of revenues of 46.6%;[185] plus

[180] Eisenach WDT, Table 1.
[181] Prices retrieved April 20, 2022 for "Individual" plans. Apple: "Apple Music", https://www.apple.com/apple-music/; Google: "Youtube Music Premium" https://music.youtube.com/music_premium; Spotify: "Spotify Premium", https://www.spotify.com/us/premium/.
[182] Eisenach WDT ¶¶ 135-147.
[183] Eisenach WDT ¶ 136.
[184] Flynn WDT ¶ 83, Figure 3.
[185] Flynn WDT ¶ 80, Figure 3; Alphabet Inc. Form 10-K for the Fiscal Year Ended December 31, 2020, p. 66 ("Alphabet 2020 10-K").

- $68.4 billion, which is equal to Alphabet's "Google advertising" revenues in 2020 of $146.9 billion multiplied by Google's assumed U.S. percentage of revenues of 46.6%.[186]

Dr. Eisenach, in turn, applies Google's company-wide net profit margin of 22% to the supposed complementary revenues of $78.5 billion to estimate Google's U.S. complementary profits of $17.3 billion.[187] A simple recitation of Google's U.S. revenues and an estimation of corresponding profits for the "Google other" and "Google advertising" segments is meaningless. Once again, the key question is whether Google's interactive music streaming offerings drive, or cause, some portion, let alone all, of these complementary revenues and profits. However, Dr. Eisenach and Ms. Flynn provide absolutely no evidence of such causation. For example, neither expert provides any evidence that Google's GPM, YouTube SVOD, or YouTube AVOD interactive music streaming offerings drive revenues of the following product categories covered under the "Google other" segment: (i) "Google Play, which includes revenues from sales of apps and in-app purchases (which we recognize net of payout to developers) and digital content sold in the Google Play store;" (ii) "hardware, including Google Nest home products, Pixelbooks, Pixel phones and other devices;" (iii) "YouTube non-advertising, including YouTube Premium and YouTube TV subscriptions and other services;" and (iv) "other products and services."[188] Similarly, neither Dr. Eisenach nor Ms. Flynn provide any evidence that Google's GPM, YouTube SVOD, or YouTube AVOD interactive music streaming offerings drive revenues of the following products categories covered under the "Google advertising" segment: (i) "Google Search & other consists of revenues generated on Google search properties (including revenues from traffic generated by search distribution partners who use Google.com as their default search

[186] Flynn WDT ¶ 81, Figure 3.
[187] Eisenach WDT ¶ 142.
[188] Alphabet 2020 10-K, p. 35.

in browsers, toolbars, etc.) and other Google owned and operated properties like Gmail, Google Maps, and Google Play;" (ii) "YouTube ads consists of revenues generated on YouTube properties;" and (iii) "Google Network Members' properties consist of revenues generated on Google Network Members' properties participating in AdMob, AdSense, and Google Ad Manager."[189] Again, a simple recitation of Google's U.S. revenues and profits for the "Google other" and "Google advertising" segments is meaningless because Copyright Owners' experts have failed to demonstrate any causal connection whereby Google's interactive music streaming business causes any portion of the cited revenues and profits, let alone all of them.

87. Dr. Watt's "parallel revenue" arguments are similarly flawed.[190] Dr. Watt provides no actual evidence as to the actual existence of such alleged causal effects. Rather, he simply claims, without any citation, that it has been "repeatedly recognized" that music streaming drives revenue on other services of a platform. Certainly, the mere existence of revenue from other offerings on a platform (i.e., Dr. Watt's "parallel revenue") does not imply that the interactive music streaming service caused the existence of any of, let alone, all of those revenues. Google's share of interactive music streaming is relatively small,[191] and it offers many diverse other products and services. It is thus more plausible that even if any causality were to exist at all, it would run, in whole or in part, in the other direction than Dr. Watt assumes, i.e., the existence (past and current) of other offerings could have a positive causal effect on Google's interactive music streaming service. Dr. Watt does not seem to have even considered this possibility.

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[189] Alphabet 2020 10-K, p. 34.

[190] Watt WDT ¶ 75.

[191] According to the MLC data relied on by Dr. Eisenach, in 2020 Google's share of interactive streams subject to Section 115 was only [redacted]. I recreated and utilized a dataset that Dr. Eisenach compiled in his WDT Workpapers of the combined streaming services' MLC Royalties Data: Eisenach WDT Workpapers, Intermediate, "royalty data.dta."

88. Dr. Spulber similarly assumes that there exists a causal effect of interactive music streaming on the services' other revenue streams, that there is no reverse causality, and that services have substantially superior information on the size of any causal effects.[192] Like Dr. Eisenach and Dr. Watt, Dr. Spulber provides no evidence or analysis to support these assumptions.

89. Dr. Eisenach, Dr. Watt, and Dr. Spulber ignore the fact that music publishers also have "parallel revenue," i.e., revenue from sources other than interactive music streaming.[193] In fact, unlike for Google, much of the music publishers' other revenues are generated by the same "assets" as their interactive music streaming royalties–the musical compositions for which they hold copyrights. It is plausible that these other revenues are positively affected by the existence of interactive music streaming. For example, interactive streams of a song may promote demand for that song in other settings that result in additional royalties being generated for the music publisher and songwriter. Dr. Watt not only does not include such effects in his Shapley Value models, he does not even consider the potential for such effects at all.

90. Dr. Eisenach, Dr. Watt, and Dr. Spulber adopt the position that "some number is better than no number."[194] For example, despite acknowledging that they have no empirical basis for any assumption regarding the size of the causal effect of interactive music streaming on other revenues, they nevertheless maintain that the royalty in this proceeding should be increased

[192] See, e.g., Spulber WDT ¶¶ 10, 15.

[193] Dr. Spulber explicitly and incorrectly asserts that, unlike artists and labels, music publishers and songwriters do not earn revenue from concerts and sponsorships. Spulber WDT ¶ 39. In fact, music publishers and songwriters earn performance royalties from concerts, commercials, and other sources. See COEX-1.3; COEX-6-5; COEX-6.2; COEX-4.5.

[194] Dr. Spulber's WDT consists almost entirely of theory-based speculation with almost no reference to the facts of the case or the characteristics of the industry (one of the few factual statements he makes is wrong—*see* fn. 151). He claims the Judges should increase the musical works rates due to the theoretical factors he identifies (e.g., Spulber WDT ¶ 18), but he provides no quantitative assessment of how big the increase should be.

to account for it (and Dr. Watt makes a particular assumption regarding the size of the causal effect in his Shapley Value model despite having no empirical support whatsoever for his assumption[195]). This runs counter to what I understand to be the general approach of U.S. law (and sound law and economics) whereby, for example, compensatory damages are awarded only to the extent that they can be proven to a reasonable degree of certainty. Damage claims based on speculation are not awarded. That is, "no number" is better than "some number" when that number is unsupported and speculative like the claims of Dr. Eisenach, Dr. Watt, and Dr. Spulber here.

91. Moreover, like Dr. Eisenach, Dr. Watt and Dr. Spulber ignore economic evidence that is inconsistent with their claims that Google is aware of substantial "parallel revenue" from other Google services that is driven (causally) by the interactive music streaming service. If income from "parallel revenue" amounted to 10%-30% of Google's interactive music streaming revenue as Dr. Watt assumes in his Shapley Value model,[196] one would expect to see Google engaged in substantial discounting relative to Spotify, which does not have a similar "platform," to increase its share of interactive music streaming subscribers. However, that is not the case. As noted above, Google does not discount more deeply than Spotify and Google has achieved a much lower share of interactive music streaming than has Spotify.[197]

F. Copyright Owners' Experts' Arguments Concerning "Asymmetry of Information" Have No Empirical Basis and Are Incorrect

92. Dr. Eisenach claims that the "evidence demonstrates that the rise of the Platforms has shifted surplus away from copyright owners and in favor of licensees for two primary

[195] Watt WDT ¶ 125.
[196] Watt WDT ¶¶ 125, 215.
[197] As noted in fn. 191, Google's share of plays was [redacted] in 2020. Spotify's share was [redacted]. Eisenach WDT Workpapers, Intermediate, "royalty data.dta."

reasons."[198] Dr. Eisenach's first reason is that the "complexity, opacity and fluidity of the Platforms' business models has created an information imbalance in favor [of] the Platforms."[199] However, he provides no empirical analysis to support the claim of an "information imbalance."

93. Dr. Eisenach cites to Professor Katz's June 8, 2021 deposition testimony in the *Phono III* remand proceeding. However, upon review of Professor Katz's remand testimony, it is clear he was making a specific point regarding the complimentary oligopoly power of the labels and never stated that the information asymmetry is "in favor of the platforms" as Dr. Eisenach indicates.[200] On the contrary, he points out that the imperfect information (which is inherent in any negotiation) could actually cause the labels to charge royalty rates that are too high. Professor Katz states:

> …[A] record company does not face a stark 0-1 decision when setting its royalty rates. Instead, it faces a more continuous decision: the greater are its royalty demands, the more likely those demands will push a service below its survival revenue rate. This effect is an extension of the standard tradeoff that a firm with market power faces when choosing its price: a higher price earns greater revenue on the sales that continue to be made but suppresses unit sales and, thus, revenues. This extension is important because it carries over to the Majors' substantial complementary oligopoly power. As the Judges have recognized, that power leads to sound recording royalty rates even higher than a monopolist (or unitary decision maker) would charge. Logically, that same complementary oligopoly power leads the Majors to demand royalties that create a substantial risk of disrupting the music streaming industry as well as reducing the availability of creative works to the public."[201]

94. Dr. Watt and Dr. Spulber make a similar argument that "asymmetric information" favors the services.[202] Their arguments, like that of Dr. Eisenach, rest on the assumption that the services know more than the Copyright Owners about a possible causal effect of having an

[198] Eisenach WDT ¶ 66.
[199] Eisenach WDT ¶ 66.
[200] Katz *Phono III* WSRT ¶¶ 19-20; Eisenach WDT ¶ 66.
[201] Katz *Phono III* WSRT ¶¶ 19-20.
[202] Watt WDT ¶¶ 74-75; Spulber WDT ¶ 7.

interactive streaming service on revenue generated by the services' other offerings.[203] Yet, like Dr. Eisenach, Dr. Watt and Dr. Spulber provide no evidence that this is the case and instead rely solely on speculation. Nor do Dr. Watt or Dr. Spulber provide any evidence as to the actual existence of such alleged causal effects. Rather, Dr. Watt simply claims, without any citation, that it has been "repeatedly recognized" that music streaming drives revenue on other services of a platform.[204] Dr. Spulber makes similar conclusory statements, but provides no evidence or analysis to support them.[205] Certainly, the mere *existence* of revenue from other offerings on a platform (i.e., Dr. Watt's "parallel revenue") does not imply that the interactive streaming service *caused* the existence of any of, let alone, all of those revenues. Causation, if any, could also run in the other direction, particularly for a service like Google with a small share of music streaming and many other more popular and established products and services. Dr. Watt, Dr. Spulber, and Dr. Eisenach simply cite no evidence whatsoever providing any evidence of superior knowledge on the part of Google about any causal effects, in either direction.

95. Even assuming the existence of "asymmetric information" possessed by the services, Dr. Eisenach, Dr. Watt, and Dr. Spulber do not explain why that fact should result in the Judges setting a higher musical works royalty in a WBWS framework. In many real-world WBWS transactions, one party, and often both parties, have so-called "asymmetric information"

[203] Watt WDT ¶ 75.

[204] Watt WDT ¶ 71. Dr. Watt's claims are also superficial because he fails to address the economic differences between the types of non-music services and products offered on the Google, Apple, and Amazon "platforms" and how interactive streaming may interact differently (again, with causality running in either direction) with different services and products. He has no basis to treat these three companies as if they were essentially identical. For example, Google is known for its internet search service and advertising platform, Apple for its devices, and Amazon for its online retailing. Even more egregious is Dr. Spulber referring to the "streaming companies" as if they formed a homogeneous group, ignoring the distinctions not only among Google, Apple, and Amazon, but also between each of these companies and Spotify. See, e.g., Spulber WDT ¶¶ 4, 10, 20.

[205] See, e.g., Spulber WDT ¶ 15.

that may affect the market outcome. Here, the publishers may have information about their own internal business considerations and economic situation that they do not share with the services.

G. Copyright Owners' Experts' "Risk Tolerance" and "Asymmetric Risk" Arguments Have No Empirical Basis and Are Incorrect

96. According to Dr. Eisenach, another reason that "platforms" have been able to gain a greater share of surplus at the expense of the Copyright Owners is that "[the Platforms'] vast sums [in cash and cash equivalents] mean that the Platforms have minimal borrowing costs and a high tolerance for risk, which translates directly into the ability to extract a disproportionate share of the surplus."[206] However, Dr. Eisenach provides no empirical support for this claim. Rather, Dr. Eisenach simply reports [redacted][207] Standing alone, these figures are meaningless. Dr. Eisenach fails to provide any generally accepted measures of the services' respective costs of capital or "risk tolerances." Nor does he provide any measure of the "risk tolerances" of the large multinational parent companies of the music publishers and record labels.[208] Thus, he ultimately has no basis to conclude that the services have *higher* costs of capital or *greater* "risk tolerance" than these multinational parent companies, a proposition that would seem to be a prerequisite for his conclusion that services obtain a "disproportionate" share of the surplus relative to the labels and publishers.

97. Moreover, Dr. Eisenach's entire line of argument about "risk tolerance" is at odds with basic economics. To the extent that the services have greater "risk tolerance" than the

[206] Eisenach WDT ¶ 67.
[207] Eisenach WDT ¶ 67.
[208] For example, SMP is part of Sony Group Corporation, which also includes Sony Electronics, Sony Pictures Entertainment, and Sony Music Entertainment; UMPG is part of Universal Music Group, which also includes a family of labels; and Warner is part of Warner Music Group, which also includes a family of labels.

publishers and labels (or, more to the point, than the large multinational parent companies that own the publishers and labels), it is efficient for the services to bear more of the risk (and the publishers and labels less) and for the services to obtain a larger share of the surplus in high surplus outcomes (and a lower share of the surplus in low surplus outcomes). Accordingly, Dr. Eisenach has no basis in economic principles for his assertion that the services' share of surplus has been "disproportionate."

98. Dr. Watt similarly argues that an "asymmetry of risk" exists, claiming that a songwriter is forced to bear "unwanted" risk associated with a service's investment (through discounted subscription prices[209]) in future revenue growth as well as the risk that the songwriter's songs will not be successful.[210] Dr. Watt's argument is flawed for numerous reasons.

99. First, Dr. Watt ignores the fact that in most cases publishers, not individual songwriters, receive the royalty payments from the services. Like Dr. Eisenach, Dr. Watt provides no evidence that the publishers are more risk-averse than the services and therefore entitled to a "risk premium." Second, publishers provide insurance and payout smoothing services for songwriters, thereby reducing the risks that individual songwriters face. Third, any risk considerations would already have been accounted for in Google's agreements with publishers that cover non-Section 115 eligible content, and yet these rates are much lower than Dr. Watt claims the Section 115 rates should be. Fourth, Dr. Watt ignores the role of incentives.

[209] Dr. Watt further errs by failing to distinguish between "discounted prices" that are aimed at bringing in relatively low WTP users in the present (and retain them in the future) and "introductory offers" that are aimed at bringing in users for whom subscription prices will be raised after the "introductory" period expires. Given the facts, there is no economic justification why publishers should receive the same royalty for a low WTP user as for a high WTP user. Indeed, as discussed above, economic logic suggests that publishers should receive a lower royalty for a lower WTP user.

[210] Watt WDT ¶¶ 78-86.

Second-best efficiency requires that a party's compensation be based in part on outcomes when outcomes depend on the party's effort (song quality depends on songwriter effort) and effort is costly (as Dr. Watt assumes in his Shapley Value model), even if the party is more risk-averse than the counterparty.[211] Thus, for purposes of providing appropriate incentives, it is important that a songwriter who writes a high quality song receives substantially more compensation than a songwriter who writes a low quality song.[212] That is, contrary to Dr. Watt's apparent claim, a songwriter's compensation should vary with the success or failure of his or her songs.

100. Dr. Watt argues that an additional risk premium is needed here because, he claims, the five-year term of the Section 115 license is longer than most real world agreements.[213] However, [redacted].[216] To the extent that a publisher has chosen to renew an agreement, Dr. Watt's claim that a long-term agreement has been forced upon the publisher by Google is false.

[211] See, e.g., P. Dutta and R. Radner, "Moral Hazard," in *Handbook of Game Theory*, Vol. 2, 1994, p. 875.
[212] The same sorts of "asymmetry of risks" that Dr. Watt claims exist here are also present in the context of permanent digital downloads. Yet, a PDD retailer receives about 30% of the revenue, while the publisher receives less than 10%. The negotiations between the retailer and the label are unconstrained by any regulation, and the label/publisher breakdown has been governed by a voluntary settlement. In contrast to PDDs, Dr. Watt would have an interactive streaming service receive only 13.9%, and the publisher receive 36.4%. Watt WDT Errata, Table 5.
[213] Watt WDT ¶ 79.
[214] Appendix C. There are [redacted] agreements of which [redacted]
[215] Leonard WDT, Appendix C1.
[216] Leonard WDT, Appendix C1.

101. Relatedly, Dr. Watt does not establish that the publishers sought shorter license terms. If the services were the parties seeking a shorter term, then Dr. Watt's argument does not follow. More generally, a longer term presents risks for both parties, as circumstances could change in either direction.

102. Dr. Watt argues that Copyright Owners face the risk that investments in revenue-building will fail, but equity owners of the services do not face this risk.[217] This argument is based on a serious misunderstanding of how equity is priced. Dr. Watt appears to believe that equity owners do not face the risk of the investments failing in the future because they can sell their equity now at the (certain) market price and relieve themselves of the risk. However, the market price itself incorporates an adjustment for the risks inherent in the future cash flows, including risks regarding the future outcome of investments. A buyer of the equity from the current owner is not willing to assume those risks unless the market price accurately reflects them. Thus, the current equity owner cannot avoid the effect of the risks by selling the equity. Those effects are built into the current price so that the market is indifferent between holding the equity (and realizing the future cash flows) and having cash equal to the equity price.

103. Dr. Watt's argument is further flawed because, as with the other claimed asymmetric risks, he ignores that publishers are the recipient of the royalties (not songwriters) and that publishers play a role in providing songwriters with insurance and payout smoothing. Moreover, Dr. Watt again fails to quantify the supposed risks, the degree of risk aversion of any relevant party, or how the identified risks should be priced. Again, Dr. Watt engages in pure speculation.

[217] Watt WDT ¶ 82.

104. Despite his extensive discussion of the supposed asymmetric risks, Dr. Watt does not build any aspect of these risks into his Shapley Value model. Thus, he provides no quantitative assessment of his claimed "risk premium."

105. Dr. Spulber claims that "risk shifting" has occurred and has caused "market failure,"[218] but does not even identify the supposed market failure, let alone demonstrate that it actually has occurred. In fact, as discussed above, the number of compositions and songwriters has been growing, the publishers' financial condition is strong, and musical works catalogs have been selling for sizable amounts. There is no apparent sign of "market failure." He claims that the "streaming companies are better positioned to handle risk" than the songwriters,[219] but he ignores the role of the major publishers, which are not insubstantial companies in and of themselves, but are also subsidiaries of large media companies. Certainly, these companies are well-positioned to "handle risk."

H. Dr. Watt's Shapley Value Model is Unreliable

106. As a general matter, Dr. Watt continues (as he did in *Phono III*) to offer up a highly abstract theoretical model, without any empirical support for the validity of the model as a description of the real-world industry or his choices regarding key parameter values. Indeed, the number of times that he makes an assertion or assumption that is central to his analysis yet lacking in any empirical support is astonishing. I will note them below. This is not an economically sound approach.

[218] Spulber WDT ¶ 20.
[219] Spulber WDT ¶ 20.

1. By its Very Structure, Dr. Watt's Shapley Value Model Has a "Center of Gravity" at a 33.3% Publisher Total Shapley Revenue Share

107. Consider Dr. Watt's preferred three label, three publisher, and three service ("3-3-3") Shapley Value model. The only other inputs to the model are the respective costs of the three types and two parameters (α and β) that are supposed to reflect "substitutability" among labels (and among publishers) and among services, respectively, given Dr. Watt's particular choice of revenue function (discussed in more detail below).[220]

108. If α = β and the three types had the same costs, all nine entities in the model would be symmetric and therefore be assigned the same Shapley Values and "Shapley revenue shares" (an entity's "Shapley revenue share" is defined as the sum of its Shapley Value and its costs, divided by the revenue of the coalition containing all participants). This implies that the total Shapley revenue share assigned to publishers (combined) would be 1/3, or 33.3%.

109. The cost figures Dr. Watt uses are not the same for the three types, but they do not move the publishers' total Shapley revenue share much from 33.3%. If α = β, even using Dr. Watt's cost figures, the publishers' total Shapley revenue share is still 27.2%.

110. Even changing the remaining two inputs to the model—the α and β parameters—does not move the publishers' total Shapley revenue share by much. Across the various "sensitivities" that Dr. Watt performs by trying various values of α and β, the publishers' total Shapley revenue share remains within a narrow band, from 29.74% to 32.13%.[221]

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[220] Dr. Watt also considers two other parameters. The parameter "k" takes on one of two values, depending on whether the labels are assumed to be "must haves." He argues that the labels are not "must have" and uses the value of k that corresponds to this case. The parameter "q" relates to the extent to which services have non-music revenues that are driven by the existence of the music service. As discussed below, Dr. Watt has no evidence whatsoever to support any value of q>0. Moreover, any value of q>0 increases the publishers' revenue share, which would strengthen the point I am making in this section. Thus, I use q=0 here.

[221] Dr. Watt ran his model with the following combinations of α and β: (0.9, 0.1) default, (0.8, 0.2), and (0.7, 0.3), in each case with q=0.1. Watt WDT, Tables 15-17. I reran these versions with q=0.

111. This lack of sensitivity suggests that the model has structural restrictions that prevent it from encompassing the full range of potential market outcomes. For example, one might ask whether there is *any* configuration of Dr. Watt's model (i.e., any choice of α and β) that would produce a total Shapley revenue share for publishers equal to the 10.5% statutory headline rate. Whether that configuration of Dr. Watt's model, or a configuration that generated a larger publisher total Shapley revenue share, was a better description of the likely market outcome could be debated in terms of appropriate choice of configuration. However, it turns out that there is *no* configuration of Dr. Watt's model that yields a 10.5% publisher total Shapley revenue share. Even with the most extreme choices of $\alpha = 0$ (labels are perfect substitutes for each other given Dr. Watt's revenue function) and $\beta = 1$ (services are not at all substitutes for each other given Dr. Watt's revenue function), the publishers' total Shapley revenue share is 19.03%. Thus, Dr. Watt's Shapley Value model is unable to explain the 10.5% rate that was the outcome of a voluntary settlement between the parties during the *Phono II* proceeding. If it is to be useful in this proceeding, Dr. Watt's model should be able to explain the *Phono II* settlement as a starting point and then make any economically justified changes to the model inputs to show how the rates should change in response to changed economic conditions since the *Phono II* settlement. Instead, Dr. Watt's model is too structurally restrictive to encompass reasonable potential market outcomes that should in fact at least be considered in the economic analysis.

112. If Dr. Watt's model is too structurally restrictive to encompass all reasonable potential market outcomes that should be considered, alternative models that encompass the potential market outcomes not encompassed by Dr. Watt's model should be evaluated against Dr. Watt's model.[222] It is not an uncommon occurrence in economic analysis to consider

[222] Or, as I have concluded, a benchmark analysis should be used in place of modeling.

alternative models of market outcomes because any single model by itself does not encompass all reasonable potential market outcomes. For example, suppose one is interested in predicting the market outcome that would result from disaggregating a monopolist into two (symmetric) competing duopolists. One might first consider the "Cournot" model of competition, which assumes that the duopolists compete in quantities.[223] Under the Cournot model, the two duopolists would be predicted to expand quantity to the point where the market price was lower than that under the monopolist, but still above marginal cost so that the two duopolists would make a positive profit.[224] In other words, except in its most extreme configuration, the Cournot model would not encompass the potential intensely competitive market outcome where price is driven down to marginal cost.[225] However, an alternative model of market outcomes exists that does encompass the intensely competitive market outcome—the "Bertrand" model of competition, which assumes that the duopolists compete in prices. Under this model, the two duopolists would be predicted to drive price down to marginal cost. An economic analysis of the likely outcome of disaggregating the monopolist into duopolists should not be based on either the Cournot or Bertrand models in isolation because doing so would inappropriately rule out reasonable potential market outcomes. Rather, the economic analysis should consider both models (and perhaps other alternative models) and determine which is the superior description of the marketplace at issue based on the economic characteristics of that marketplace.

113. What Dr. Watt has done here with his Shapley Value model is analogous to assuming the Cournot quantity-setting model is applicable without considering the Bertrand

[223] The Cournot model of competition is not to be confused with the "Cournot complements" model that has been widely discussed in CRB proceedings.
[224] With constant elasticity of demand, for example, the duopolists' profit margins are half that of the monopolist.
[225] Market price equal to marginal cost would occur in the Cournot model only if the elasticity of demand were infinite.

price-setting model. Just as the Cournot model, due to its structural characteristics, does not encompass intensely competitive market outcomes, Dr. Watt's Shapley model, due to its structural characteristics, produces total publisher Shapley revenue shares that do not stray far from 33.3%. Dr. Watt has not considered alternative models of market outcomes, let alone shown that his Shapley Value model is a superior predictor of market outcomes in the music copyright licensing marketplace than alternative models.

2. Shapley Values Incorporate Considerations That May Not Be Present in Effectively Competitive WBWS Outcomes

114. I understand that, in contrast to *Phono III*, the *Phono IV* rates and terms should be set to reflect the outcome of an effectively competitive WBWS market outcome. Whatever merits a Shapley Value model may have offered in principle when the 801(b) factors (e.g., Shapley's conception of "fairness") applied, such a model is useful in *Phono IV* only if it accurately describes the WBWS (i.e., market) outcome that would occur under effective competition. Dr. Watt claims that this is the case.[226] However, the economics literature recognizes that Shapley Values can diverge from WBWS market outcomes.[227]

115. In particular, the Shapley Value construct can assign more Shapley Value to a category of substitutable entities (such as publishers) than may be the case in a market outcome. For example, consider a situation where two suppliers of perfect substitutes supply an input to a downstream manufacturer. The downstream manufacturer makes revenue equal to $1 with one of the inputs (it has no need for both) and zero otherwise. The downstream manufacturer has zero costs (apart from any payment for the input) and the two input suppliers also have zero

[226] Watt WDT ¶ 6.

[227] See, e.g., F. Gul, "Bargaining Foundations of Shapley Value," *Econometrica*, 1989. In an experiment described in C. Moellers, et al., "Communication in Vertical Markets: Experimental Evidence," *International Journal of Industrial Organization*, 2017, the Shapley Value framework failed to predict "market" outcomes accurately.

costs. A Shapley Value model applied to this situation would suggest that each input supplier would receive a Shapley Value of $0.17, with a combined Shapley Value for the two input suppliers of $0.33.[228]

116. However, consider the market outcome if the downstream manufacturer puts the input supply contract out to bid. If the input suppliers have good information about each other's costs, the competitive outcome can be that the input price is driven down to zero. The input suppliers would effectively get zero, rather than the $0.33 Shapley Value. Put another way, the Shapley Value model provides a poor prediction of the market outcome in this context.

117. The reason is that the Shapley Value construct inherently rewards the input suppliers for the "necessity" of having the input, even though neither individual supplier is necessary. In contrast, the ability of the downstream manufacturer to substitute between the two suppliers' inputs results in intense competition and, ultimately, a zero input price in the market outcome.

118. Given that the effectively competitive WBWS standard applies in the *Phono IV* proceeding, Dr. Watt's use of the Shapley Value construct is inappropriate, absent an explicit showing that it accurately predicts market outcomes in this particular marketplace.

3. Dr. Watt's Model Incorrectly Assumes That Publishers Should Receive the Same Shapley Values as Labels

119. Dr. Watt's model assumes that the Shapley Values for a publisher and label should be the same.[229] Put another way, Dr. Watt's model assumes that the contribution of the

[228] With three entities, there are 3! = 6 possible orderings. The first input supplier would have non-zero incremental value (of $1) only in orderings where it was in the second slot and the second input supplier was in the third slot. There is only one such ordering. Thus, the Shapley Value for the first input supplier (and the second, by symmetry) is $1/6 = $0.17. Another odd aspect of the Shapley Value construct is that, in this example, both input suppliers receive positive Shapley Value despite only one of them being used by the downstream manufacturer.

[229] Watt WDT ¶ 204. Note that although the Shapley Values from Dr. Watt's model are the same for a publisher and a label, the Shapley revenue shares differ because the publisher and label costs differ.

songwriter is fundamentally on equal footing with that of the artist.[230] I discuss elsewhere in this report why that assumption is incorrect. Because Dr. Watt's model incorrectly assumes that publishers (and songwriters) should get the same Shapley Values as labels (and artists), it necessarily must overstate the Shapley Values (and thus Shapley revenue shares) for publishers.

120. Timing can be economically important, and Dr. Watt's Shapley Value model evaluates the Shapley Values at a point in time when the sound recordings have already been created and just prior to the incorporation of the sound recordings into the interactive music streaming service. At that point in time, access to the specific musical work right covering the specific composition used in a given sound recording is "necessary" if that sound recording is to be included in the service, but the situation would be different if the Shapley Value exercise were set at an earlier point in time, prior to the artist creating the sound recording. At that earlier time, the artist had a choice among compositions, including his or her own compositions, and this ability to substitute among compositions would reduce the value of any given composition.[231]

121. Had Dr. Watt set his Shapley Value model at the time prior to the creation of sound recordings, he would have obtained a very different result. For example, consider a Shapley Value model for the division of surplus created by a sound recording. The sound recording would be created by an artist performing a composition created by a songwriter. There are two songwriters from which the artist can choose, and the songwriters are perfect substitutes (meaning they produce songs of equal quality). The service would incorporate the sound recording into its repertory, and doing so would generate (additional) service revenue equal to

[230] In Watt WDT ¶ 159, Dr. Watt states that "the more valuable an input is in terms of its contributions to the creation of surplus, the higher will be its relative Shapley [value]." This implies that two inputs with the same Shapley Value must have made the same contribution.

[231] Songwriters may claim that, at the earlier point in time, they would have had the ability to substitute among artists. However, the evidence that songwriters vie among themselves to be chosen by popular artists suggests that artists have a greater ability to substitute among compositions than songwriters have to substitute among artists.

$1. Finally, to keep things simple, suppose all entities have zero costs. The total Shapley Value going to the two songwriters with this setup is $0.17.[232]

122. Now consider a Shapley Value model that, like Dr. Watt's Shapley Value model, is set at a time *after* the sound recording has already been made. Now, there are only three entities in the model: the artist, the songwriter whose composition was chosen by the artist, and the service. Note that, at this point in time, the artist no longer has a choice between the two songwriters, and the songwriter that was not chosen is not included in the Shapley Value model.[233] With the Shapley Value model set at the time *after* the sound recording had already been created, the chosen songwriter receives a Shapley Value of $0.33.

123. Thus, by setting the Shapley Value model at a point in time *after* the sound recording had been made (as Dr. Watt does) instead of *before*, the total Shapley Value to songwriter(s) doubles from $0.17 (split among the two substitute songwriters) to $0.33.

124. The discrepancy between before and after becomes even greater if the artist is assumed to have the capability of writing his or her own songs. Suppose a sound recording of the artist's own composition would generate incremental revenue of $0.99 when added to the service's repertory, while a sound recording of either of the two songwriters' compositions would generate incremental revenue of $1. That is, a sound recording of the songwriters' compositions would produce only a slightly higher incremental revenue than a sound recording of the artist's own composition. In this case, under the Shapley Value model set at the point in

[232] There are four entities and thus 4! = 24 total orderings. Consider the first songwriter. It has zero incremental value in all orderings where it is in the first, second, or fourth slot. When it is in the third slot, it has incremental value of 1 in those orderings where the other songwriter is in the fourth slot (because then the artist and service are in the first two slots), of which there are two. So, the Shapley Value to the first songwriter is 2/24 = 1/12. The total Shapley Value for the two songwriters combined is therefore 1/6 or 17%.

[233] Alternatively, it could be included, but it would have zero incremental value in any ordering. One of the Shapley axioms is that any entity with zero incremental value in all orderings receives a zero Shapley Value.

time before the sound recording was created, the songwriters would receive a combined Shapley Value of only $0.002. The Shapley Value model set at the point in time after the sound recording had been made is unchanged—a coalition consisting of the artist, the songwriter the artist had chosen, and the service are still "needed" given the timing of the model and, in particular, the artist can no longer substitute her composition for that of the songwriter. Accordingly, the songwriter whose composition had been chosen by the artist would still get a Shapley Value of $0.33 when the Shapley exercise is set after the sound recording had been made, despite the artist having been able to produce a very close substitute for the songwriter's composition before the sound recording was made.

125. In short, Dr. Watt's Shapley Value model inflates the Shapley Value assigned to publishers by implicitly setting the exercise at a point in time after the sound recordings have been made, when artists and services no longer can substitute among compositions. Had Dr. Watt set his model at an earlier point in time–before the sound recordings were made–and taken into account an artist's ability to substitute among songwriters, the resulting Shapley Values and Shapley revenue shares for publishers (songwriters) would have been lower. This is a further sense in which Dr. Watt's particular formulation of his Shapley Value model actually builds in market power for the publishers as a feature rather than eliminating it, as he claims.

126. Dr. Watt points to the [redacted] from the "blanket" AV streaming licenses as support for his Shapley Value model.[234] However, Dr. Watt's model produces a ratio of 1.36:1, [redacted]. In fact, given Dr. Watt's assumptions

[234] Dr. Watt claims that the AV streaming licenses are a good comparable for the Section 115 statutory license because the "on demand whole catalog" rights are similar to Section 115 content. Watt WDT ¶ 15. However, the YouTube licenses covering non-Section 115 content are substantially more similar because the context of use is virtually identical. A Barry's Bootcamp license, in contrast, is set in a different economic context than interactive music streaming.

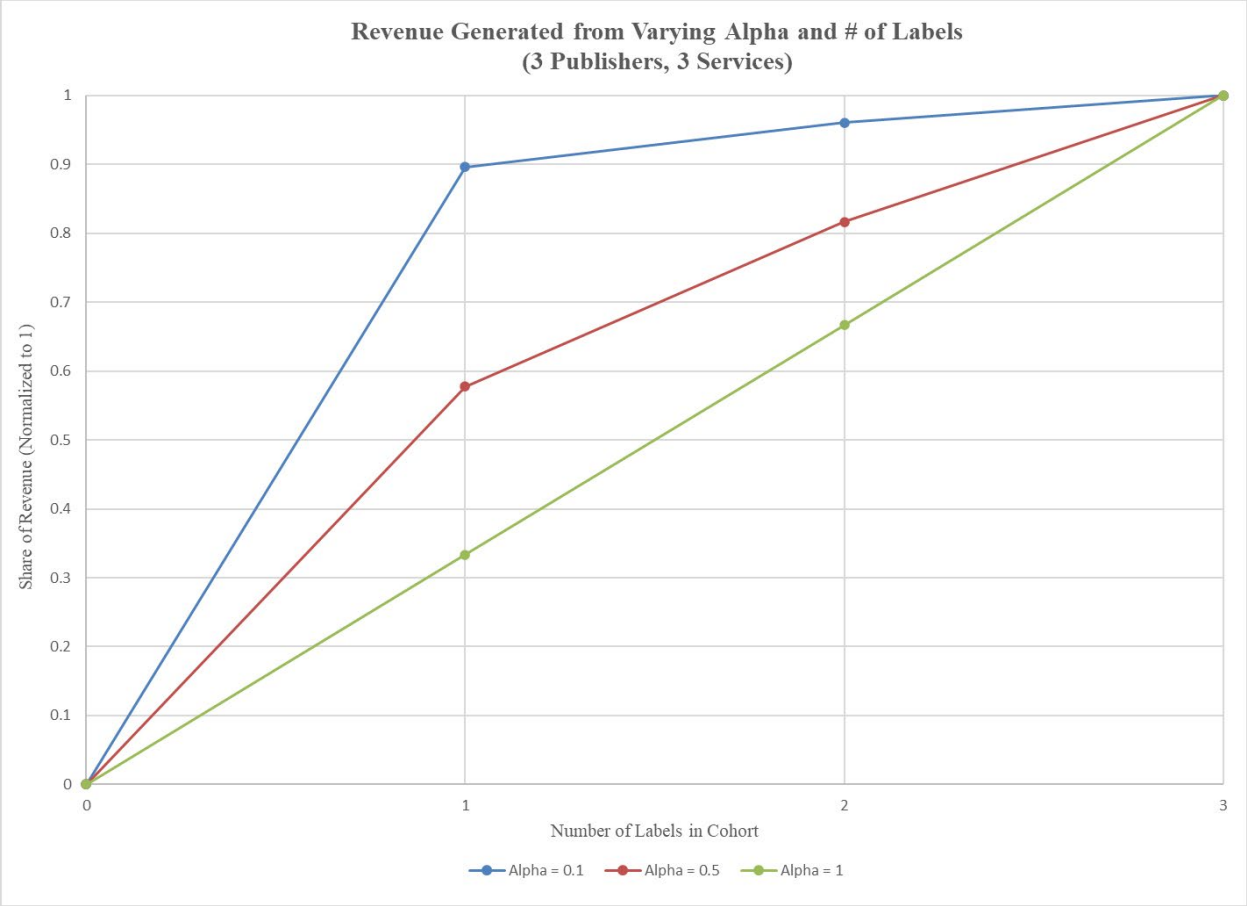
regarding the costs of the publishers and labels and his assumption that publishers and labels should have the same Shapley Values (not Shapley revenue shares), a [redacted] is not possible in Dr. Watt's model. Thus, in fact, the "blanket" AV streaming licenses are inconsistent with Dr. Watt's Shapley Value model. They cannot be reconciled. If Dr. Watt believes in his Shapley Value model, he should reject the AV streaming licenses as potential comparables.

4. Dr. Watt's Revenue Function is Not Consistent With the Economic Nature of Interactive Music Streaming

127. In his Shapley Value model, Dr. Watt assumes a particular form for the function that specifies the service revenue that a given coalition is assumed to generate. This functional form assumes that revenue would increase with the number of entities within a category (labels, publishers, and services) at a decreasing rate, holding the number of entities in the other categories constant. The extent of the decreasing rate in Dr. Watt's revenue function is governed by two parameters, α (for labels and publishers) and β (for services). Figure 5 shows revenue generated by coalitions that have 0, 1, 2, and 3 labels, respectively (in each case also having three publishers and three services) according to Dr. Watt's revenue function for values of $\alpha = 1$, 0.5, and 0.1.[235]

[235] I have normalized the total maximum revenue to 1 for the purposes of creating the graph.

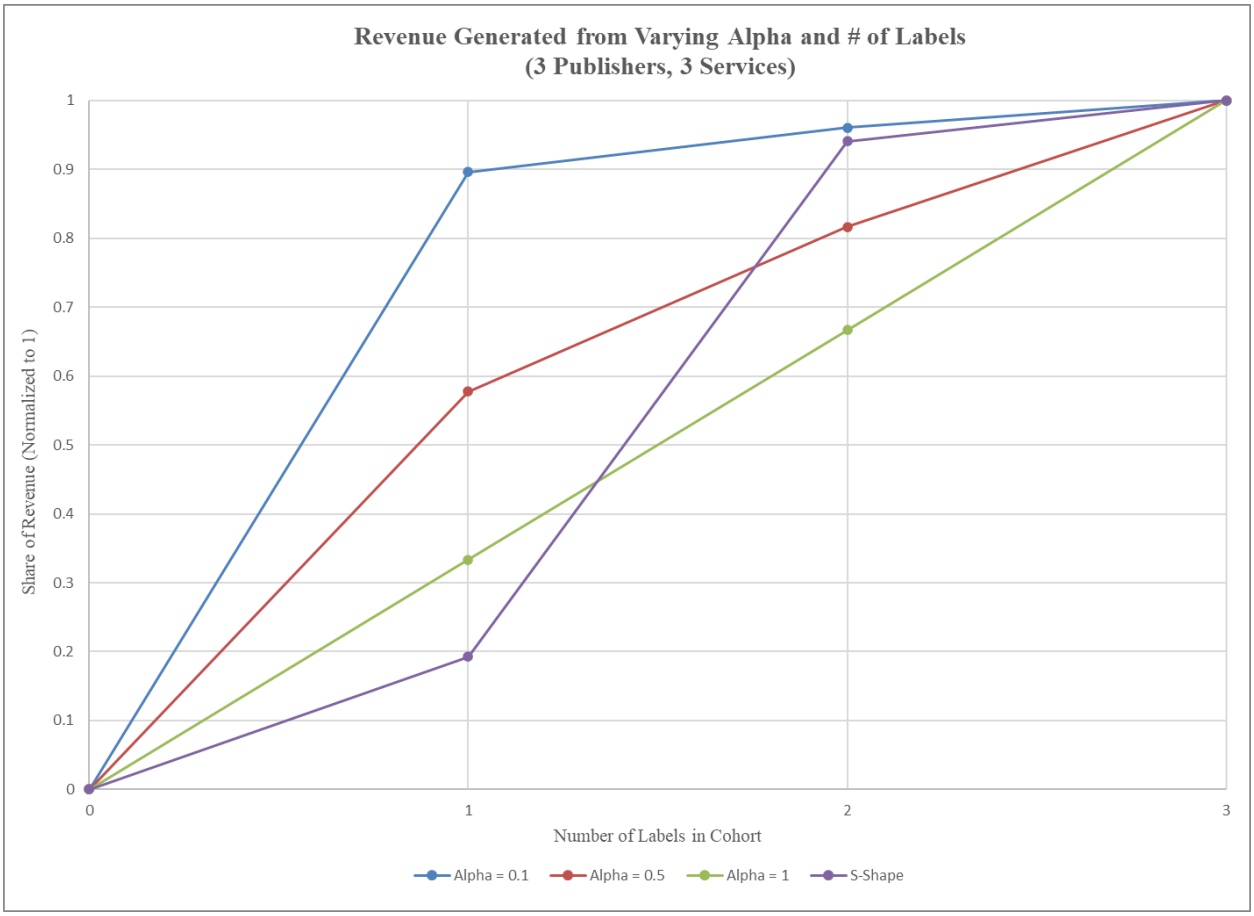
Figure 5:



128. Note that in the case of $\alpha = 0.5$ or 0.1, Dr. Watt's revenue function assumes revenue increases more rapidly in moving from 0 labels to 1 label than in moving from 2 labels to 3 labels.

129. Dr. Watt's assumed shape for the revenue function is not consistent with the evidence that an interactive music streaming service needs a deep repertory to be viable. This feature of the marketplace could be captured by a revenue function with an "s" shape rather than the shape Dr. Watt assumes. With an s-shaped revenue function, revenue increases relatively slowly with the amount of repertory initially, then increases relatively rapidly beyond a certain threshold repertory level, then increases relatively slowly again as the repertory approaches 100% of potential repertory. Figure 6 gives an illustration of an s-shaped revenue function.

Figure 6:



130. Dr. Watt argues that the interactive music streaming services made a choice to offer near-universal catalogs, and that they could instead have chosen to be like video streaming services, offering narrower catalogs of content and competing for exclusives on certain content.[236] In other words, he argues, what appears to be the "must have" nature of the major labels is actually a choice of the services. However, he overlooks important economic differences between the two contexts that explain why music streaming evolved differently than video streaming. First, in the video streaming context, it is not the case that there are three video content providers that have the same level of consolidation as the major labels do in music.

[236] Watt WDT ¶ 61.

Second, many video streaming services are also content creators themselves (e.g., Netflix, Amazon), and would not choose to license their content to other services, whereas that is not the case in music streaming. Third, there is a substantial difference between music streaming and video streaming in the nature of the content offered. Songs are typically less than five minutes in length. Users string together songs, sometimes in playlists, for longer listening periods. Video content, in contrast, is typically substantially longer—30-60 minutes per episode for a series and 1.5-2 hours for a movie. If separate music streaming services were offered for each label or for subsets of artists, a user would face substantial costs in searching across different services to string together songs into a longer listening period. Searching across various services to create a playlist consisting of multiple songs each lasting several minutes is more costly (as a percentage of the value of the content) than searching across services to find a two-hour movie. It is not even clear how a user could set up such a playlist across multiple services. Thus, there are underlying economic reasons why music streaming services offer comprehensive repertories, while video streaming services do not. It was not a "choice" of the services.

131. Dr. Watt argues that a major label is "must have" to a service only when other services have that label, so that in a world where every service was missing a major label's catalog, the services' combined revenues would still be substantial (reduced perhaps by a percentage equal to the major label's share of streams).[237] But, if that were true, one would expect that the market would have evolved very differently, with each label offering an interactive music streaming service focused on its own catalog. One reason we do not see that in the real world is that the benefits to offering a near-universal interactive music streaming service

[237] Watt WDT ¶ 62.

are substantially greater than Dr. Watt acknowledges, so that each label offering a service based on its own catalog is not attractive.

132. Dr. Watt's assumed revenue function is of the "Cobb-Douglas" functional form. Rather than providing any empirical support for the Cobb-Douglas form (as opposed to the s-shaped form, for example) in the specific context of interactive music streaming, he attempts to support his assumption by stating that the Cobb-Douglas form is "the most commonly used" and "universally accepted" in economics.[238] Such statements are meaningless. It is most certainly not "universally accepted" that Cobb-Douglas is the best functional form for every situation. There are no "universal" laws or functional forms in economics that apply everywhere. Indeed, Dr. Watt does not point to a single piece of economics literature to support the claim that Cobb-Douglas is "universally" applicable to all situations or, for that matter, even to interactive streaming. Whether a given functional form applies in a specific situation is an empirical question, one that Dr. Watt never addresses.[239] Similarly, while Dr. Watt performs several "sensitivities" for the α and β parameters (but only within a narrow range),[240] he does not provide any empirical evidence to support his "preferred" choices for α and β (or his choice of the narrow range on which to run sensitivities).

[238] Watt WDT ¶ 69.

[239] One reason that Cobb-Douglas is "commonly used" in abstract theoretical modeling is because it is easy to work with mathematically. Yet, the same attributes that make it easy to work with in theoretical models lessen its ability to accurately describe some real-world phenomenon. A recent study concluded, "The weight of evidence accumulated in the empirical literature emphatically rejects the Cobb-Douglas specification." *See* Sebastian Gechert, Tomas Havranek, Zuzana Irsova, Dominika Kolcunova, "Measuring capital-labor substitution: The importance of method choices and publication bias," *Review of Economic Dynamics*, 2021. Thus, there is no reason to assume that it applies in the context of music streaming.

[240] Dr. Watt's "preferred" value of α is 0.9 and his sensitivities go only as low as 0.7. He provides no basis to rule out lower values of α. As noted below, one way to model effective competition in the context of Dr. Watt's Shapley Value model that assumes three highly consolidated labels is to have the labels be very substitutable, which would correspond to a value of close to 0. However, Dr. Watt never runs a sensitivity with a value of α below 0.7. As discussed above, however, even with α=0 there are still other structural restrictions in Dr. Watt's Shapley Value model that limit how low the publisher total Shapley revenue share can go.

133. An empirical analysis may be hampered by a lack of data. At no time has one or more of the major labels been unavailable to all streaming services.[241] But, the consequence of having no empirical support is that Dr. Watt bases the important assumptions about the shape of the revenue function and his α and β parameters on nothing more than his say-so. Other than his subjective assessment, he has no basis to rule out alternative assumptions about the shape of the revenue function or the parameters that could lead to substantially different results.

5. Dr. Watt's Claim That the Shapley Construct "Eliminates" Complementary Oligopoly Power Is Incorrect

134. Dr. Watt claims that his Shapley Value model "eliminates completely all strategic abuses of market power."[242] However, this is not correct, because (among other things) he takes as given the existing levels of consolidation among both the labels and publishers, and it is this consolidation (plus, in the case of publishers, fractional ownership) that creates the complementary oligopoly problem that would be mitigated at lower levels of consolidation. The problems of consolidation are worsened by the structural restrictions of Dr. Watt's Shapley model, as discussed above.

135. To illustrate these points, I will provide an example that starts with a "1-1-1" Shapley model that assumes three entities: one publisher, one label, and one service. All three entities, and in particular, all of the musical works rights, are required to achieve revenue of 1.

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[241] Dr. Watt points to the example of the Beatles catalog, suggesting that the services' combined revenues were not significantly affected by the absence of the Beatles catalog (Watt WDT ¶¶ 63-64). However, the Beatles catalog is nowhere near the size of a major label catalog and thus is not representative of what would happen if a major label were withheld from all services. The Beatles catalog was responsible for only about 0.5% of streams (there were 1.7 billion Beatles streams as of late October 2019 and 387 billion total streams on Spotify in 2019) (Daniel Bukszpan, "The Beatles remain a pop culture phenomenon even among Gen Z fans. Here's why," *CNBC*, October 26, 2019. Eisenach WDT Workpapers, Intermediate, "royalty data.dta."). In fact, the Beatles example underscores the importance of appropriately modeling effective competition in the Shapley Value framework. If services' revenues are not much affected by the absence of a single small, but non-negligible, label/publisher, the royalty for sound recordings or musical works should be smaller absent the consolidation that exists in the major labels and publishers.

[242] Watt WDT ¶¶ 18, 34.

Any coalition without all three entities has revenue of zero. All entities have zero costs. Under this setup, given the symmetry of the three entities, the publisher receives a Shapley revenue share of 33.3%, as do the other two entities.

136. Now consider disaggregating the single publisher into two symmetric publishers, where each holds half of the musical works rights. Again, for a coalition to achieve revenue of 1 requires the label, the service, and all of the musical works rights; coalitions without all four entities have revenue 0. Under this setup, each of the two disaggregated publishers gets Shapley revenue share equal to 25%, and the total publisher Shapley revenue share is 2*25% = 50%.

137. Thus, the disaggregation of the single (monopoly) publisher into two publishers *increases* the Shapley Value captured by publishing from 33% to 50%. *This increase in the publisher total Shapley Value occurs despite the fact that the musical works rights collectively are not "contributing" any more in the case of two publishers than in the case of one.* Rather, the Shapley Value captured by publishing increases in moving from one monopoly publisher to two complementary oligopoly publishers because one "must have" publisher has been replaced by two "must have" publishers, each able to claim the entire maximum possible revenue of the coalition as its incremental contribution in those orderings where it appears in the last slot. An additional bottleneck to achieving revenue has been created, and under a naïve application of the Shapley Value methodology, this additional bottleneck is rewarded by the Shapley approach in the same proportion as the other three bottlenecks (the label, the service, and the other publisher). This creation of an additional publishing bottleneck increases the total publisher Shapley Value, even though the "contribution" of the musical works rights is the same as with one publisher. This example demonstrates that the Shapley Value approach does not "eliminate" "abuses of

market power" as Dr. Watt claims. If multiple "must have" entities within a type exist, the type can extract a greater Shapley Value than if the entities were consolidated.

138. Further deconsolidation of publishing within this Shapley Value model can reverse the effects of the complementary oligopoly power that exist at higher levels of consolidation. Consider splitting each of the two publishers into two, so that there are now four symmetric publishers, each controlling 25% of musical works rights.[243] Suppose now that only three of these four publishers are required for a coalition (that also includes the label and service) to achieve revenue of 1.[244] Other coalitions have revenue of zero. Thus, having access to a large share (over 50%) of musical works rights is "necessary," but any given publisher is *not* necessary. The needed share of musical works rights can be achieved with any three of the four publishers. This makes the four publishers substitutes to a degree in terms of a coalition having a sufficiently large share of the musical works rights.

139. With this setup, the total publisher Shapley revenue share (across the four publishers) is 40%, lower than the 50% with two publishers. Thus, deconsolidation of the publishers from two to four decreases the amount of complementary oligopoly power. Assuming that a coalition requires more than 50% of the musical works rights to generate revenue of 1, as the number of publishers goes to infinity, the total publisher Shapley revenue share converges to 25%. Thus, eventually, the deconsolidation of publishers pushes the total publisher Shapley revenue share below the level achieved by the single completely consolidated (monopolist) publisher.

[243] For the purposes of this example, I assume the simplest case where each song is "owned" by one publisher, and each publisher owns 25% of the universe of songs. In other words, I assume no fractional ownership. Thus, licensing from one publisher would give a service rights to 25% of songs.
[244] This is a form of the s-shaped revenue function discussed above.

Number of Publishers	Total Shapley Value to Publishers
1	33.3%
2	50.0%
4	40.0%
8	33.3%
∞	25.0%

140. The reason deconsolidation eventually leads to a lower total publisher Shapley revenue share (after the initial increase due to the creation of multiple "must have" publishers) is that there are n publishers, but only $\frac{n}{2} + 1$ publishers are needed (when n is even). This creates substitution possibilities and lowers the total revenue share that the Shapley construct assigns to publishers.[245]

141. In contrast, when there are only two publishers, given the greater degree of consolidation, a coalition must have *both* publishers to surpass the 50% musical works rights threshold and generate revenue. They are not substitutes for each other.

142. This example demonstrates that Shapley models such as Dr. Watt's do not necessarily eliminate complementary oligopoly power or market power, but rather build such power in as a feature when the models take the level of publisher and label consolidation as given. The consolidation can create "must have" status for publishers or labels by dampening or eliminating substitution possibilities among labels and publishers, respectively.

[245] As noted above, the Shapley construct rewards a type for being "necessary" even if every entity within the type is not necessary. Thus, despite the number of publishers going to infinity and only half being needed to generate the maximum revenue of 1, the Shapley construct nevertheless assigns 25% of revenue to the publishers as a group. Other models of market outcomes, such as a bidding model, would predict that in the case of a large number of publishers competing for a limited number of spots, price would bid down to zero (or marginal cost), leaving the publishers with a revenue share of zero.

143. This underscores a major flaw in Dr. Watt's Shapley Value modeling. He does not allow the level of substitution among labels and publishers that is necessary for the model to be consistent with effective competition. Effective competition would be better modeled by, for example, deconsolidating the publishers and labels into smaller entities in conjunction with an s-shaped revenue function.[246]

144. Rather than recognizing that his Shapley Value model builds in complementary oligopoly power, Dr. Watt appears to embrace the idea that a publisher should be able to charge a higher royalty caused by publisher consolidation.[247] This would not be consistent with effective competition. For publishers, their market power is exacerbated by fractional ownership, which means that the share of streaming that a publisher can block is substantially greater than the share of streaming for which it has ownership. However, allowing the royalty to reflect such market power is not consistent with effective competition.

6. Dr. Watt's Assumption Concerning the Substitutability of Services Has No Empirical Support and Is Therefore Unreliable

145. Dr. Watt makes a particular assumption about how substitutable the services are for each other. In particular, he assumes they are very substitutable and again considers "sensitivities" for the associated β parameter only in a narrow range. But, as he does so often, Dr. Watt provides no empirical support whatsoever for his assumption. He merely states that it is "logical" that services are as substitutable as he asserts.[248] Dr. Watt has no objective basis for his assumption, just his subjective view based on his qualitative assessment that the services are "similar." But, of course, "similarity" could encompass a much wider range of values for β than

[246] As noted above, replacing the Shapley construct with an entirely different model of competition also may be needed to appropriately model effective competition.
[247] Watt WDT ¶ 50.
[248] Watt WDT ¶ 133.

Dr. Watt considers in his sensitivities. When assessing "similarity," he ignores, for example, that Google offers a mix of content, including non-Section 115 content, and this feature differentiates it from other interactive music streaming services. Differentiating factors would tend to move β toward 1 (less substitutability).

7. Dr. Watt's Estimate of Songwriter Costs Makes No Economic Sense and Therefore Is Unreliable

146. Dr. Watt argues that an appropriate measure of songwriter costs for inclusion in the Shapley Value model are the royalty payments that songwriters receive. But, as he notes several times, an entity's Shapley Value must at least cover the entity's costs. Thus, by assuming that the songwriters' costs are equal to the royalties they have been paid (at, for example, the *Phono II* and *Phono III* rates), he is artificially forcing the Shapley Value model to produce a musical works royalty that is at least at the *Phono II* and *Phono III* level. This circularity is a form of assuming the answer.

147. The correct songwriter costs to consider in this context are the songwriter's incremental costs of writing the songs, which may involve certain out-of-pocket costs (although many of these costs, such as a piano, may not have been incremental with respect to the songwriting activity if the individual would have purchased the piano anyway) and the opportunity cost of the songwriter's time. However, as in many other areas, Dr. Watt provides no analysis of the key issues, for example: how much time is involved in songwriting, what are songwriters' opportunity costs of time, and to what extent are the costs incremental with respect to interactive streaming? Moreover, it is likely that the time spent on songwriting and the opportunity cost of such time varies substantially across songwriters and even across time for the same songwriter.

148. Beyond the circularity issue described above, Dr. Watt is incorrect to claim that songwriter costs are equal to the royalty payments they receive.[249] In fact, all we can infer about songwriter costs from the royalty payments they receive is that the costs must have been less than or equal to the (expected) royalty payments. Otherwise, the songwriters would not have found it in their best interests to have incurred the costs to write the songs. Thus, by using the royalty payments as a cost measure, Dr. Watt is necessarily overstating the songwriter costs (which inflates the publishers' Shapley Value as calculated in Dr. Watt's model). For this same reason, Dr. Watt's "sensitivity" where he assumes that songwriter costs are greater than the royalty payments they receive makes no economic sense. From the standpoint of economic rationality, a songwriter would engage in songwriting only if the costs exceeded the benefits (taking into account any tangible or intangible benefits the songwriter obtains). For many songwriters, the incremental costs related to interactive music streaming may, in fact, be well below the payments they receive. While Dr. Watt performs a "sensitivity analysis" where he assumes songwriter costs are 50% of payments received, as with many other important parameters in his model, he provides no empirical basis for costs being 50% of royalty payments versus 25% versus 10%. As discussed above, the number of songwriters and the number of musical works have been increasing steadily over time, suggesting that royalty payments are well above songwriters' opportunity costs, resulting in expanded supply.[250]

149. Dr. Watt further fails to account fully for the fact that songwriters are motivated to incur the costs to write songs by the potential to generate royalties from sources beyond

[249] Watt WDT ¶ 96.

[250] Dr. Watt claims that the 50% assumption means that the average songwriter is earning a significant profit. But, given the superstar nature of the music industry, it is quite possible that average compensation is relatively high, but median compensation is low (due to a long right tail) and the "marginal" songwriter's compensation is just equal to his or her opportunity cost.

interactive music streaming, such as commercial radio, non-interactive music services, and synchronization opportunities. A songwriter may have chosen to incur many or all of the costs of songwriting even in the absence of interactive music streaming royalties. In that case, Dr. Watt's assumed songwriter costs are not incremental with respect to interactive music streaming and are not properly included in the Shapley Value model. For example, if a given songwriter found that, even in the absence of interactive music streaming royalties, other royalties would still exceed his or her songwriting costs, he or she would have engaged in songwriting and therefore would have incurred the same costs. In that case, the songwriting costs for that songwriter would not be incremental with respect to the interactive music streaming.

150. While Dr. Watt bases his songwriter cost figures on the interactive music streaming royalties received as discussed above, he also attempts to support the reasonableness of those figures by reference to data from the U.S. Bureau of Labor Statistics ("BLS") on the compensation of "music directors and composers."[251] However, the BLS data do not provide reliable support for Dr. Watt's songwriting cost figures. First, the BLS category "music directors and composers" appears to have little overlap with the songwriters at issue in this proceeding. As of May 2020, the BLS reported the category including a total of 9,200 individuals,[252] while Dr. Watt claims that there are as many as 8,000,000 songwriters.[253] Moreover, the BLS provides breakdowns of the 9,200 individuals, which indicate that 3,690 (over one-third) are employed by

[251] Watt WDT ¶ 99.

[252] U.S. Bureau of Labor Statistics, March 31, 2022, *Music Directors and Composers*. Retrieved April 11, 2022, from https://www.bls.gov/oes/current/oes272041.htm.

[253] Watt WDT ¶ 99-101. The 8,000,000 figure is the number of "creators" on Spotify. Dr. Watt alternatively speculates that the number of songwriters could be 80,000 (1% of 8,000,000) or 42,100 (the number of "artists" with catalogs generating more than $10,000 in royalties on Spotify). In any event, the BLS category does not include the large majority of Dr. Watt's estimate of the songwriter population, and may in fact include very few given the composition of the category (e.g., a large percentage of the individuals in the category are employed by religious or educational organizations).

religious organizations, 2,360 are employed by "performing arts companies," and 1,900 are employed by educational organizations; only 130 are reported as being in the "sound recording industry" and only 230 are reported as being "independent artists, writers, and performers."[254] Dr. Watt has no basis to assume any meaningful correspondence between the BLS category he uses and the songwriters at issue in this case.

151. Second, the BLS data provide the average annual compensation for individuals for a full-time job (as noted above, frequently as a music director for a religious, performing arts, or educational organization), not the compensation for the specific time spent writing the songs that are streamed on interactive music streaming services. Many individuals who engage in such songwriting may not do so on a full-time basis and thus may devote significantly less than 2,080 hours a year (the figure the BLS uses to calculate annual compensation) to songwriting.

152. Dr. Watt's claim (based on multiplying the BLS annual compensation for the "music directors and composers" category to his estimated number of songwriters) that songwriter costs are as much as $418 billion makes no economic sense.[255] Given that annual publishing royalty payouts to songwriters are only $753 million,[256] substantially less than Dr. Watt's claimed songwriting costs of $418 billion, songwriters would have no incentive to engage in songwriting if Dr. Watt is correct. Rather, Dr. Watt is mistaken in his use of the BLS data or his estimate of the number of songwriters, or both. His estimates of songwriter costs are entirely unreliable.

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[254] U.S. Bureau of Labor Statistics, *Music Directors and Composers*, https://www.bls.gov/oes/current/oes272041.htm. I note that Dr. Watt's data extends through 2020, as his WDT was submitted prior to the BLS's update on March 31, 2022.
I note that Dr. Watt's data is from 2020, as referenced by Dr. Watt retrieved March 23, 2022

[255] Watt WDT ¶ 100. This corresponds to the 8,000,000 songwriter figure.

[256] Watt WDT ¶¶ 208-210.

I. Copyright Owners' Experts' Attempts to Raise Vague Antitrust Concerns Are Inappropriate and Incorrect

153. Dr. Eisenach claims that the U.S. interactive music streaming industry is highly concentrated because [redacted][257] However, as is well-known among antitrust practitioners, shares and concentration can be poor indicators of "market power."[258] Indeed, Dr. Watt argues that the services are highly substitutable[259] and, given the absence of barriers to expansion, this would imply that the services could be highly competitive despite the shares and concentration level.

154. Dr. Watt similarly attempts to make vague antitrust claims by raising allegations of "big tech" market power.[260] However, Dr. Watt does not even allege Google has market power in interactive music streaming. The most he does is make speculative arguments that because platforms are not well understood, the mechanical rates for interactive music streaming should be higher.[261] As discussed above, these arguments make no economic sense and should be given no weight.

[257] Eisenach WDT, Table 1, ¶ 50. To the extent that the substantial rate increases sought by the Copyright Owners would drive one or more services from the marketplace, the industry would become even more "concentrated."
[258] *See, e.g.*, D. Carlton and J. Perloff, *Modern Industrial Organization*, 4th Edition, 2005, p. 644: "Market shares are imperfect indicators of market power… For example, if entry is easy, then the industry pricing is severely constrained regardless of whether an existing firm has a large market share."
[259] Watt WDT ¶ 55.
[260] Watt WDT ¶ 16.
[261] Dr. Watt references the U.S. House of Representatives Report on "big tech." "Investigation of Competition in Digital Markets," Majority Staff Report and Recommendations, U.S. Judiciary Committee, Subcommittee on Antitrust, Commercial, and Administrative Law (October 6, 2020). Watt WDT ¶16. However, in my review of the report, I did not identify any instances where it discussed Google's music streaming service specifically. Thus, it is not clear what relevance the House Report has to this proceeding.

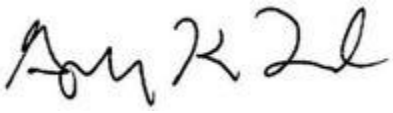
Before the
UNITED STATES COPYRIGHT ROYALTY JUDGES
LIBRARY OF CONGRESS
Washington, D.C.

In the Matter of: **DETERMINATION OF ROYALTY RATES AND TERMS FOR MAKING AND DISTRIBUTING PHONORECORDS (*Phonorecords IV*)**	**Docket No. 21-CRB-0001-PR (2023-2027)**

DECLARATION OF GREGORY K. LEONARD

I, Gregory K. Leonard, declare under penalty of perjury that the statements contained in my Written Rebuttal Testimony in the above-captioned proceeding are true and correct to the best of my knowledge, information, and belief.

Executed this 22nd day of April, 2022 in Hillsborough, California.



Gregory K. Leonard

Appendix A

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Dr. Gregory K. Leonard is a vice president in the Antitrust & Competition Economics Practice of CRA. He specializes in applied microeconomics and econometrics. He has provided testimony before US federal and state courts, government agencies, and arbitration panels on issues involving antitrust, damages estimation, statistics and econometrics, surveys, valuation, and labor market discrimination.

Dr. Leonard has written extensively in the areas of antitrust, industrial organization, econometrics, intellectual property, class certification, and labor economics. His publications have appeared in journals such as the *RAND Journal of Economics*, the *Journal of Industrial Economics*, the *Journal of Econometrics*, the *International Journal of Industrial Organization*, and the *Antitrust Law Journal*, among others. Dr. Leonard's writings were cited by the Court of Appeals for the Federal Circuit in its *Uniloc* decision. He is the Editorial Board Vice Chair for Economics of the *Antitrust Law Journal* and has served as a referee for numerous economic journals.

Dr. Leonard has given invited presentations on antitrust and intellectual property issues at the (US) Federal Trade Commission, the US Department of Justice, the former Anti-Monopoly Bureau of China's Ministry of Commerce, the Supreme People's Court of China, and Japan's Fair Trade Commission. He served as a consultant on the issue of immunities and exemptions to the (US) Antitrust Modernization Commission.

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Discussant, "Proving Damages in Difficult Cases: Mock Trial & Discussion," NERA Antitrust & Trade Regulation Seminar, July 10, 2004.

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Panelist, "China Inside and Out," American Bar Association, Beijing, People's Republic of China, September 16-17, 2013.

Panelist, "Remedies in Patent Cases," Fifth Annual Conference on The Role of the Courts in Patent Law & Policy, Berkeley and Georgetown Law Schools, November 1, 2013.

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Panelist, "FRAND Royalty Rates After Ericsson v. D-Link," American Bar Association, May 15, 2015.

Participant, Patent Damages Workshop, University of California-Berkeley, March 3, 2016.

Panelist, "FRANDtopia – In a Perfect World," LAIPLA Spring Conference, May 5, 2018.

Panelist, "Chicago Forum on International Antitrust Issues," Northwestern Pritzker School of Law, June 15, 2018.

Panelist, "Competition in Digital Advertising: Is There Online and Offline Convergence?," Challenges to Antitrust in a Changing Economy, Harvard Law School, November 8, 2019.

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Professional activities

Member, American Economic Association

Member, Econometric Society

Member, American Bar Association

Contributor, www.antitrust.org

Contributor, ABA Section of Antitrust Law, *Econometrics*, 2005

Associate Editor, *Antitrust*, 2007-2010

Senior Editor, *Antitrust Law Journal*, 2012-; Associate Editor, 2010-2012

Co-Editor, ABA Section of Antitrust Law Economics Committee Newsletter, 2009-2012

Member, Economics Task Force, ABA Section of Antitrust Law, 2011-2012

Member, ABA Delegation to International Seminar on Anti-Monopoly Law: Procedure and Substantive Assessment in Merger Control, Beijing, People's Republic of China, December 15-17, 2008.

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the MOFCOM Draft Guidelines for Definition of Relevant Markets," 2009.

Member, Working Group for drafting the "Joint Comments of the American Bar Association Section of Antitrust Law and Section of International Law on the SAIC Draft Regulations on the Prohibition of Acts of Monopoly Agreements and of Abuse of Dominant Market Position," 2009.

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Referee: *Econometrica*, *Review of Economics and Statistics*, *International Journal of Industrial Organization*, *Review of Industrial Organization, Journal of Sports Economics*, *Journal of Environmental Economics and Management*, *Research in Law and Economics*, *Labour Economics*, *Eastern Economic Journal*, *Journal of Forensic Economics, Antitrust, Antitrust Law Journal, Journal of Competition Law and Economics, Advances in Econometrics.*

Professional history

12/2019–Present	*Vice President*, Charles River Associates
2012–2019	*Partner*, Edgeworth Economics
2008–2012	*Senior Vice President*, NERA Economic Consulting
2004–2008	*Vice President*, NERA Economic Consulting
2000–2004	*Senior Vice President*, Lexecon, Inc.
1991–2000	*Director*, Cambridge Economics, Inc.
1990–1991	*Senior Analyst*, NERA Economic Consulting
1989–1990	*Assistant Professor*, Columbia University

- Econometrics
- Statistics
- Labor Economics

Appendix B

Appendix B
Documents Relied Upon

Exhibits and Bates Documents

COEX-1.3.
COEX-1.5.
COEX-2.16.
COEX-2.2.
COEX-2.26.
COEX-2.28.
COEX-4.12.
COEX-4.5.
COEX-5.23.
COEX-5.24.
COEX-5.25.
COEX-5.27.
COEX-6.2.
COEX-6.5.
COEX-7.16.
COEX-7.22.
COEX-7.23.
COEX-7.24.
COEX-7.25.
COEX-7.26.
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Appendix C

RESTRICTED—Subject to Protective Order in Docket No. 21-CRB-0001-PR (2023-2027) (Phonorecords IV)

Appendix D1

RESTRICTED—Subject to Protective Order in Docket No. 21-CRB-0001-PR (2023-2027) (Phonorecords IV)

Appendix D2

RESTRICTED—Subject to Protective Order in Docket No. 21-CRB-0001-PR (2023-2027) (Phonorecords IV)

Appendix E1

RESTRICTED—Subject to Protective Order in Docket No. 21-CRB-0001-PR (2023-2027) (Phonorecords IV)

Appendix E2

RESTRICTED—Subject to Protective Order in Docket No. 21-CRB-0001-PR (2023-2027) (Phonorecords IV)

Appendix E3

RESTRICTED—Subject to Protective Order in Docket No. 21-CRB-0001-PR (2023-2027) (Phonorecords IV)

Proof of Delivery

I hereby certify that on Tuesday, April 26, 2022, I provided a true and correct copy of the Written Rebuttal Statement of Google LLC – Volume 2 of 4 to the following:

Powell, David, represented by David Powell, served via E-Service at davidpowell008@yahoo.com

Johnson, George, represented by George D Johnson, served via E-Service at george@georgejohnson.com

Joint Record Company Participants, represented by Susan Chertkof, served via E-Service at susan.chertkof@riaa.com

Amazon.com Services LLC, represented by Joshua D Branson, served via E-Service at jbranson@kellogghansen.com

Sony Music Entertainment, represented by Steven R. Englund, served via E-Service at senglund@jenner.com

UMG Recordings, Inc., represented by Steven R. Englund, served via E-Service at senglund@jenner.com

Spotify USA Inc., represented by Joseph Wetzel, served via E-Service at joe.wetzel@lw.com

Warner Music Group Corp., represented by Steven R. Englund, served via E-Service at senglund@jenner.com

Pandora Media, LLC, represented by Benjamin E. Marks, served via E-Service at benjamin.marks@weil.com

Apple Inc., represented by Mary C Mazzello, served via E-Service at mary.mazzello@kirkland.com

Copyright Owners, represented by Benjamin K Semel, served via E-Service at Bsemel@pryorcashman.com

Zisk, Brian, represented by Brian Zisk, served via E-Service at brianzisk@gmail.com

Signed: /s/ Victor Jih